DOCUMENT RESUME

ED 059 077 SE 013 267

AUTHOR	Heiser, Ed
TITLE	Environmental Education.
INSTITUTION	Billings Public Schools, Mont.; Eastern Montana Coll., Billings.
PUB DATE	Jan 72
NOTE	120p.
EDRS PRICE	MF-$0.65 HC-$6.58
DESCRIPTORS	*Elementary Grades; *Environmental Education; *Experimental Programs; Interdisciplinary Approach; Outdoor Education; *Program Descriptions; Program Development; Reports; Resident Camp Programs

ABSTRACT

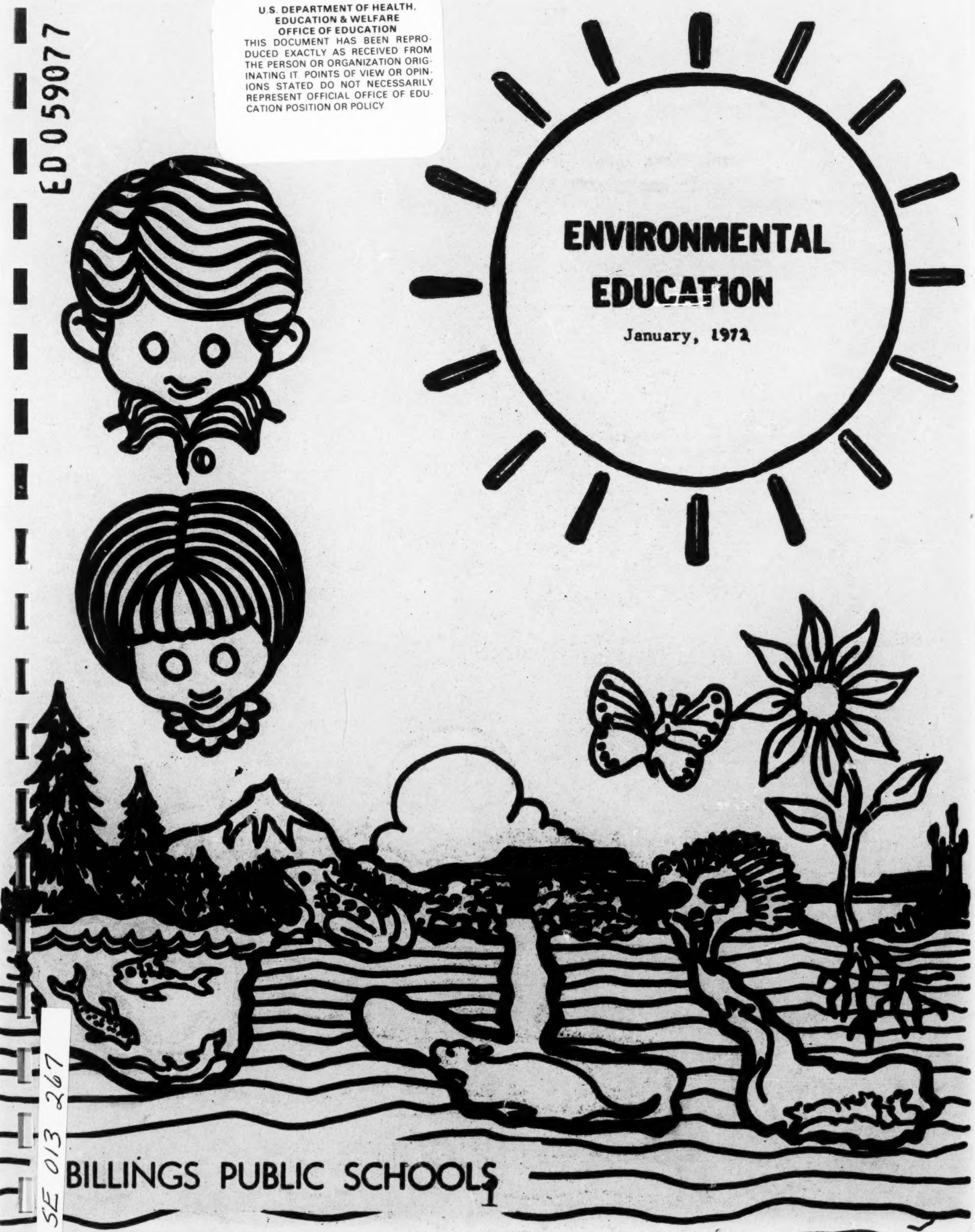
Furnished in this comprehensive report is a resume of a five-year experimental program in environmental education conducted by the Eastern Montana College Laboratory School in conjunction with Eastern Montana College and the Billings School District #2. The basic purpose of the program is to make teachers, and in turn students, aware of the possibilities of studying the outdoors right outside their classrooms. This learning can then enhance the culminating activity of field instruction at a resident school camp. The resume gives a brief history, definition and statement of the need for environmental education, together with a summary of the objectives, content, curriculum, financing, management, and growth of the environmental education program from 1966 to 1971. Guidelines for establishing an interdisciplinary environmental education program are outlined, based on an evaluation instruemtn prepared by Dr. Helen Grilley, Eastern Montana College. This cites principles, objectives, methods used including pre-planning, follow-up, and evaluation, and curriculum experiences in seven subject areas. Numerous appendices present administrative details, camp program schedules, and teacher workship information. (BL)

ED059077

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

ENVIRONMENTAL EDUCATION

January, 1972



BILLINGS PUBLIC SCHOOLS

SE 013 267

Prepared by: Ed Heiser, Coordinator
Environmental Education Activities
Billings School District #2

Partially based on a report presented to the Board of Trustees, Billings School District #2, Billings, Montana, August 9, 1971, by Dr. Wilson F. Clark, Chairman, Division of Science and Mathematics, and Professor Erick K. Erickson, Director of the Eastern Montana College Laboratory School, Eastern Montana College, Billings, Montana.

TABLE OF CONTENTS

Chapter Page

Introduction........ i
I Environmental Education: History and Importance........ 1
Origin in Billings........ 6
    Pilot Program - 1966-67........ 6
    Pilot Program - 1967-68........ 7
    Pilot Program - 1968-69........ 7
    Pilot Program - 1969-70........ 8
    Pilot Program - 1970-71........ 8
Definition of Environmental Education........10
The Need for Environmental Education........11
    Air Pollution........11
    Water Problems........11
    Urbanization........12
    Land Use and Competition for Use........13
Root-Causes Versus Symptoms of Environmental Problems........15
Finance........17
The Long-Range Objectives of the Environmental Education Program/Eastern Montana College & Billings School District #2........18
    Overall Objectives........18
    Components of the Overall Objectives........18
Specific Objectives of the Environmental Education Program........21
II Curriculum: Schoolgrounds and Within Classroom........23
Curriculum: Camp Sessions........28
    Ecosystems Studies........28
    Geological Studies........28
    Geographic Studies........29
    Plot Studies........29
    First Aid........29
    Art........30
    Recreation........30
    Music and Dramatics........30
Learning Possibilities Within the Environmental Classroom........32
III Administration........34
    Tutor-Counselors........34
    Cabin Assignments........36
    Cabin Clean-Up........37
    Mess Procedures........37
    Camp Physician........39
IV A Guide for Establishing an Environmental Education Program........40
    Principles of the Environmental Education Program........40
    Objectives of the Environmental Education Experience........42
    The Environmental Education Laboratory School Method........45
    Pre-planning for the Environmental Education Experience........45
    Classroom Procedures Before or After the Environmental Education Experience........45
    Preparation for a Field Trip........46
    Program Evaluation........50
    The Role of the Schools in Producing Responsible, Environmentally Literate Citizens........51
Bibliography........52
Appendix A........53
Appendix B........61
Appendix C........79
Appendix D........80
Appendix E........81
Appendix F........82
Appendix G........83
Appendix H........84
Appendix I........85
Appendix J........92

INTRODUCTION

The following pages are a resume of an experimental program in environmental education. This program has been carried out for the past five years as a pilot program by the Eastern Montana College Laboratory School in conjunction with Eastern Montana College and the Billings School District #2.

The basic purpose of the program is not just the time spent in the field, but rather to make teachers aware of the possibilities of studying the outdoors right outside their classrooms. The time spent in the field is intended to be the culminating activity of a year's study within and outside the classroom. The school playground has many possibilities for learning about the fundamental environmental conditions. A school camp would be of very little value if isolated from the pre-camp and post-camp activities.

Since the instruction is carried on by the classroom teachers during the year and at camp, an in-service training course is required. Consequently, the educational goals can be reached only with the full and enthusiastic support and participation of the classroom teacher.

Further purposes of this resume are to give a brief statement of definition and of the need for environmental education, then to present a summary of the objectives, content, curriculum, financing, management, and growth of the Environmental Education Program cooperatively developed by Eastern Montana College and the Billings School District #2, covering the years 1967 through spring of 1971. This program is a unique one in the State, perhaps even unique throughout the nation, in that in the first five years of its operation it has been a totally locally developed program, and has been funded by the Parent-Teacher Associations of the respective participating schools. There has been no federal money, no state money, no college money, and no school district money specifically assigned to this program. And the program has grown from involving one sixth grade classroom of thirty (30) children in the spring of 1967 to thirty-three (33) sixth grade classrooms from twelve schools and containing approximately 900 children in the spring of 1971.

This resume is, then, primarily a background statement and an historical document. It does not speculate about the future of the actual program, although such plans and speculations certainly have been discussed by the staff.

CHAPTER I

ENVIRONMENTAL EDUCATION: HISTORY AND IMPORTANCE

A basic understanding of the forces of nature and their relationships to man are the underlying concepts of the conservation of our natural resources. There is a real need for making conservation education an individual and public concern. Conservation of our natural resources needs to enter into the life experiences of children through a systematized and regulated plan. Such plans may take shape in the form of curriculum planning for environmental education of elementary school children.

Environmental education is an approach to more efficient and effective learning. The purpose of environmental education is to enrich, vitalize, and compliment content areas of the school curriculum by means of a firsthand observation and direct experience outside of the classroom. Instruction, which for the most part, has been traditionally bounded by the four walls of the classroom, is highly verbal. Extending the classroom into the out-of-doors provides the setting for bringing deeper insight, greater understanding, and more meaning to those areas of knowledge, which ordinarily are merely read and discussed and not actually experienced.

With a shortened work week pending for most Americans, the worker finds himself facing a greater number of "empty hours" than he has ever before encountered. These hours, however, need not be empty hours filled with sedentary activity, but rather vital hours of creativity. The pressing need for wise use of leisure time can be surely met, in part, through skills. Likewise, since the President's Council on Physical Fitness, there has been a resurgent interest in the physical well-being of America's youth. Environmental education can be a major contributing factor to increased physical fitness, at the same time, preparing youth for the challenges that lie ahead in our technological world.

Whenever a teacher escorts her class from the schoolroom to the exterior of the building, she has taken the first step in the initiation of an environmental education program. The class emerges into a completely different learning environment from the classroom, one that possesses unlimited educational opportunities. Students are free of textbooks and other conventional learning devices. The subject matter now available to them is found in the total resources of the community and surrounding area. Environmental resources contribute to almost every aspect of living.[1]

Let us go back in history to the beginning of environmental education and trace its development briefly to the present time.

The history of environmental living and learning has been traced back to the beginning of mankind: environmental living was the existence of the primitive people. The emphasis of primitive education was upon the control of the learner by his elders. The child learned from observing and participating in the cultural activities of his group.[2]

The early Greeks emphasized activity and experience in the outdoors. In their outdoor classrooms, the Athenians allowed human capacities to develop for effective civic responsibility, while the Spartan military camps educated their youth to become hardy soldiers and submissive citizens.

---

[1] M. Alexander Gabrielson and Charles Holtzer. The Role of Outdoor Education. (New York, The Center of Applied Research in Education, 1965). p. 20.

[2] William H. Freeberg and Loren E. Taylor. Programs in Outdoor Education. (Minneapolis, Burgess Publishing Company, 1963). p. 382.

The "Sense-Realists" of the Seventeenth Century - Comenius, Locke and Franke - believed that knowledge should be taught through the medium of the senses, and that the method of teaching should be "learning by doing", which implied some interest in environmental study. Comenius advocated that the teacher should take the pupils on long hikes both for recreation and study. Reports of Franke's German School mentioned the fact that children were taken for walks during which time the objects of nature and the industries of man were explained to them.[3]

Rousseau, Pestalozzi, and Froebel, naturalists of the Eighteenth Century, also supported the idea of direct experience through the senses. Rousseau advocated the return to nature and natural things; the child should first learn to preserve his own existence and then learn to reason from these fundamental experiences. Pestalozzi, who had charge of a boarding school, took his students on weekly excursions into the country for geography and nature study. Froebel believed in education outdoors and took his class on weekly excursions into the mountains and valleys in order to study nature as well as to receive spiritual uplift.[4]

The outdoor emphasis in the United States developed out of a natural heritage of environmental living received from the early American Indian, from the early American trader and explorer, and from the early pioneer.

---

[3] Frederick Eby. The Development of Modern Education. (New York, Prentice-Hall, Inc., 1952). p. 254.

[4] Ibid., p. 522.

Industrial change took the children away from rural living and placed them in cities. Today's interest in environmental education is an attempt to provide environmental learning for a growing group of urban children.

Many present day educators point up the values and practices in environmental education today. These values are classified by the following statement:

> There is great value in the subject matter learned in the environmental education situation. It is good for city youth not only to be told how to plant a tree, conduct a fish survey, or build a bird refuge, but also actually to do these things. It is the involvement of the total organism, so valuable for learning at its best. To contrive such a learning situation in a classroom is difficult.[5]

Two other writers point out that basic needs are served by environmental education:[6]

The need for effective learning;
The need for realism in education;
The need for recreative experience;
The need for awareness.

One element lacking in many curricular experiences today is the great joy of discovery. The classroom extended into the outdoors provided the setting in which students may once again enjoy the sheer thrill of discovery along with plain, down-to-earth fun of learning.

---

[5] Julian Smith. Outdoor Education for American Youth. (Washington, D. C., American Association for Health, Physical Education and Recreation, 1959). p. 13.

[6] Donald Hammerman and William Hammerman. Teaching in the Outdoors. (Minneapolis, Burgess Publishing Company, 1963). p. 1.

Environmental education is not intended to replace textbook learning. It is a method that can be successfully and intelligently introduced by all teachers in all subject-matter areas, to supplement and complement written and oral expression.

The method of environmental education is explained by Freeberg and Taylor:

> The method by which teachers provide the learning experience is most important; it should be closely associated with and accompanied by adequate library materials, textbooks, classroom lessons, and other aids to learning. Teachers are not required to have all the knowledge necessary to explain and interpret things children study in an outdoor education program.[7]

---

[7] William Freeberg and Loren Taylor. Programs in Outdoor Education. (Minneapolis, Burgess Publishing Company, 1963). p. 3.

ORIGIN IN BILLINGS

The faculty of the Eastern Montana College Laboratory School in cooperation with the college personnel of Eastern Montana College, under the direction of Dr. Wilson Clark, instituted the first plans for an environmental education program. The environmental education unit was designed for the sixth grade boys and girls of the Eastern Montana College Laboratory School. This school is part of the Billings Public School System. Billings School District #2 has been in full support of the program from its origin.

Pilot Program - 1966-67

The First Annual Environmental Experience was held on May 23 and 24 at the Evangelical United Brethren Church Camp, which is situated on the Boulder River, south of Big Timber, Montana. It involved fourteen (14) boys and sixteen (16) girls from the Eastern Montana College Laboratory School.

Per pupil cost of this experimental program was approximately $10.00 per student. The costs were assumed by the Division of Education at Eastern Montana College.

The instructional program dealt with giving the students a basic understanding of the total environment, including the soil, rocks, air, water, erosion, plants and animals, and a stress on conservation. The instruction was carried on by the concerned faculty of Eastern Montana College.

Pilot Program - 1967-68

The Second Annual Environmental Experience was held May 21-23 at the Lion's Camp near Red Lodge, Montana. For this endeaver the sixth graders of the Taft School of Billings School District #2 were chosen to participate in the program, along with the sixth graders of the Eastern Montana College Laboratory School. This involved fifty-two (52) children.

Per pupil cost of this experimental program was approximately $10.50 per student. The costs were assumed by the Parent-Teacher Associations of the two schools.

The instructional program dealt with geography, rocks and minerals, aquatic ecology, and plot study. Time was also set aside for first-aid, organized physical education, and arts and crafts.

Pilot Program - 1968-69

The Third Annual Environmental Experience was held May 18-23. It was also held at the Lion's Camp near Red Lodge, Montana. This expanding program involved the sixth graders of Bitterroot, Taft, Rimrock and Eastern Elementary Schools of the Billings School District #2, and also the sixth graders from the Ashland Public Schools, Ashland, Montana. The program involved 190 pupils. (See Appendix I)

Per pupil cost of this experimental program was approximately $10.50 per student. The costs were assumed by the Parent-Teacher Associations in some schools and by direct assessment in others. Each school financed its own program.

In keeping with one of the objectives of the program, the involvement of the classroom teacher, an in-service training course was required of the participating classroom teachers. This course was offered by the Eastern Montana College Science Department and carried two quarter hours credit. The course enabled the teachers to conduct their own environmental education program. Workshops have been an important part of the program. (See Appendix A)

Many hours of pre-camp instruction were carried on in the clasroom and on the school grounds by both the college personnel and the classroom teachers. Consequently, the environmental experience was just the climax to the year's study.

Pilot Program - 1969-70

The Fourth Annual Environmental Experience was held May 18-29. It was also held at the Lion's Camp near Red Lodge, Montana. The program involved sixth graders from Eastern, Taft, Bitterroot, Boulder, Grand, Highland, Rimrock, and Newman Elementary Schools of the Billings School District #2. This endeavor involved 485 sixth graders.

Per pupil cost of this experimental program was approximately $15.00 per student. Again, the costs were assumed by the Parent-Teacher Associations in some schools and by direct assessment in others. Each school financed its own program.

Pilot Program - 1970-71

The Fifth Annual Environmental Experience was held May 9-27. It was also held at the Lion's Camp near Red Lodge, Montana. The program involved sixth graders from Eastern, Taft, Bitterroot, Boulder, Grand, Highland, Rimrock, Newman, Central Heights, Meadowlark, Rose Park, and Poly Drive Elementary Schools of the Billings School District #2. The endeavor involved 902 sixth graders. (See Appendix B)

Per pupil cost of this experimental program was approximately $15.00 per student. Again, the costs were assumed by Parent-Teacher Associations in some schools and by direct assessment in others. Each school financed its own program in the way of its choice.

For a summary of school attendance over the five-year span, see Appendix C.

DEFINITION OF ENVIRONMENTAL EDUCATION

A semantic morass exists at present concerning the three terms, conservation education, outdoor education, and environmental education. Much hair-splitting has occurred. Various academic areas have sought to pre-empt one or another of the terms. In this program we have frequently used Outdoor Education, since a significant aspect of the programs involves study and investigations outdoors - out of the classrooms. But this term means to many people merely anything one does out-of-doors - sports, camping, hiking - and this is the meaning the Physical Education field has given the term. Such a meaning does not embrace our philosophy. To reflect that philosophy, we will consistently use the term Environmental Education.

Of the many definitions developed, the one which best expresses the philosophy of this program is as follows:

> "Environmental education consists of the recognition by man of his interdependence with his environment and with life everywhere, and the development of a culture which maintains that relationship through policies and practices necessary to secure the future of an environment fit for life and fit for living."

-Dr. Matt Brennan and Dr. Paul Brandwein,
who developed this definition while
associated with the Pinchot Institute
for Conservation Studies.

THE NEED FOR ENVIRONMENTAL EDUCATION

Today, unlike just a few years ago, many people are now aware that man, particularly in highly industrialized nations, has driven a long way down the road of contamination and destruction of the very earth on which he depends. Many are the symptoms, and they have been chronicled in innumerable publications.

While in Montana we do not have the severe problems of many states, we do have examples of all of them. And our social, economic, political, and educational structures, attitudes, and actions (which basically are the same as those of the whole nation) have been and still are leading us further along the same blind path. The only reasons Montana is not in as severe difficulty as many states are the shorter period of time since settlement, and the smaller population.

To be specific as to problems, here are a few examples from the Billings area that, as mentioned, illustrate national problems but on a smaller scale.

A. Air pollution.

Air pollution now is of disaster proportions in many parts of the nation. It is a major problem in Missoula. And air pollution is an important problem in Billings, with the refineries, power plant, rendering works, incinerators, home furnaces, cars, and much else contributing.

B. Water problems - pollution, destruction, and scarcity of good water.

On a national basis, immense difficulties are faced in cleaning the lakes and rivers of untreated sewage from 70,000,000 people, of the thousands of industrial waste materials, of the hundreds of toxic chemicals, and of the millions of tons of silt - all in an effort to have good water and enough of it. Locally, we can show the Yegan Ditch - an open sewer, the "weeping wall" on the Bench area, the heavily overtaxed sewage treatment plant which gives primary treatment only, Canyon Creek and other streams heavily laden with silt and agricultural chemicals, the annual destruction due to high waters of the rivers, the streams draining feedlots, the storm sewer difficulties, the water rationing, and a host of other water problems.

C. Urbanization, and all its consequences.

In our nation, about 70% of the total population actually lives on about 2% of the land area. For the youth (ages 5-17), 77% of them will be living in urban areas by 1985. This concentration of people, usually in a totally unplanned manner, creates a host of difficulties. In Montana we have about five (5) people per square mile, yet when one considers Billings and Great Falls alone, about 20% of our total population of 700,000 is in those two urban areas. If one adds Helena, Bozeman, Butte, Miles City and perhaps a few more, one finds that even though we think of Montana as a rural state, in truth, most Montanans are urban people, with urban experiences and attitudes, and they are faced with urban problems similar to, but perhaps not yet as severe as those of heavily populated states.

In Billings, for instance, we have had much concern about the business shift from downtown to the outskirts, the decay of some parts of the city, the intermingling of industrial and residential areas, the traffic and parking problems, the urban sprawl (totally unplanned) on productive agricultural land, the pressures and difficulty of supplying adequate public services (water, sewer, and police and fire protection, to name a few), park development and maintenance, solid waste disposal, and many more.

D. Land use and competition for use.

Throughout the nation almost no real thought has been exhibited in considering the possible competitive uses of land, or in real long range planning for the most reasonable land use. One can find exceptions, but in the main land use, is determined almost entirely by economic factors, by isolated private initiative with few if any public concerns, or by piecemeal or expedient decisions of various levels of government.

In the Billings area, we face similar problems, such as a number of haphazard real estate developments giving little thought to needed services or even to health standards, leapfrog urban sprawl westward on the good irrigated farm land, interstate highway construction on that good agricultural land, the continual dilemma of street maintenance and traffic flows, very large areas (as at K-Mart and others) of blacktop and the water run-off as well as esthetic problems they cause, house construction on unstable land (as along the base of the rims and on Mountain View Boulevard), residential and other construction in the flood plain of the Yellowstone River, continual changes of zoning, isolated islands of unannexed industrial land within the city, demands for city services by adjacent non-city areas, development of city parks (we've done fairly well on that), lack of development of county parks, and many more. True, we have a Planning Board, and some long-range plans are on paper, but both have been quite ineffective thus far in really directing the nature and areas of the growth of the city.

One could site other problem areas of importance, but the point is that for almost every national problem one names, examples of each are present locally, now. As said before, the only reason they are not more severe than they are at present is that we in Montana just haven't had the time to destroy or degrade to the extent found in older areas. But our attitudes and actions are driving us rapidly along the path followed by many other states.

ROOT-CAUSES VERSUS SYMPTOMS OF ENVIRONMENTAL PROBLEMS

> "It is evident that some important root-causes of our environmental crisis rest in our present consumer and corporate behavioral patterns, our inability to cope with the population dilemma, and the lack of environmental policies that are responsive to an emerging ethic where man is living compatibly with his environment."
>
> -Dr. William Stapp,
> School of Natural Resources,
> University of Michigan,
> Ann Arbor, Michigan, in a
> program report for the Kenai
> Peninsula (Alaska) School
> Board, July, 1971.

Too frequently in the past, as well as in the present, we try to solve environmental problems by attacking the symptoms, rather than the causes. For instance, in solid waste disposal, the symptoms of the problem are massive amounts of solid waste. As someone remarked acidly, "We're standing knee-deep in garbage, shooting rockets to the moon." We attack this problem by trying merely to get the solid waste out of sight - by burning it, or by burying it, or by locating an open dump out of view. We're attacking the symptom. Instead, we need to look at why we have such a large amount of waste. The root-causes of the problem, then, are not the waste, but are instead, our attitudes and our patterns of action. We have an attitude of prodigal waste; we worship product changes and gadgetry irrespective of whether or not they are improvements; we demand of our industries (and industries through advertising feed and build that demand) ridiculously extravagant use of materials in packaging; we buy on the basis of exterior superficial factors of color or chrome rather than on the quality of the product; we encourage and allow (through our buying habits) industry to build obsolescence into many products; we have great contempt for other people, as shown by our strewing trash widely; and economics as well as apathy have not moved us very far on the critically important matter of recycling of materials.

In similar ways, one can show that the root-causes of most of our resource and of our environmental problems lie in attitudes, in social customs, and in political apathy to force solutions. For very few problems it is valid that technical knowledge does not exist to solve a problem or at least to make significant progress towards solution.

As a logical extension of these ideas, one realizes that to make significant headway, we as a nation, need to try to alter (a) individual and consumer attitudes and behavior patterns, (b) corporate and industrial attitudes and behavior patterns, and (c) governmental attitudes and behavior patterns.

FINANCE

For the five years of the program, it has had no Federal money, no State money, no District money, and no College money specifically budgeted to the program. Financing has been met by the Parent-Teacher Associations of the participating schools. They have held many fund raising activities to meet the charge per child. In addition, numerous classrooms of children have carried on their own fund raising endeavors such as hotdog lunches, donuts and coffee at a few polling places and so on.

In each participating school, the PTA has raised the money, or gotten the parents to pledge the money for their children, or a combination of these. In no case was a child unable to go merely for the lack of money.

This remarkable and sustained effort by the PTA's is a tribute to them and to their belief in the program. However, this arrangement cannot, of course, continue indefinitely, and stable, district-wide funding will be necessary for the program to grow.

A table of financial data is given in Appendix D.

THE LONG-RANGE OBJECTIVES OF THE ENVIRONMENTAL EDUCATION PROGRAM/EASTERN MONTANA COLLEGE AND BILLINGS SCHOOL DISTRICT #2

The program of the last five years has made a strong concentration of effort on the sixth grade level. It is but a beginning. In time, we would hope environmental education prevades the curriculum from kindergarten through the 12th grade. The long-range objectives stated here are those which we feel should be stated for a student graduating from a Billings high school. Some aspects of present curricula now contribute to reaching some of these objectives. Much more could be done. At present, these objectives are general guides for us, and our sixth grade program is the place we've started implementation.

A. Overall Objectives.

Ever since the beginning of this program, our overall objectives have been to help children:

1. to become knowledgeable concerning their total environment (biological, physical, social, cultural, economic),
2. to become skillful in how to ferret out the significant aspects of a problem or situation,
3. to become sensitive to their own role in and responsibility to developing a productive and liveable environment, and
4. to become motivated to work constructively towards the solution of environmental problems.

B. Components of the Overall Objectives.

1. Specific areas of knowledge which are either now in our program or which in time we hope to have in our program:
    a. The concept of "spaceship earth" - a closed system totally dependent on its own resources except for incoming energy from the sun.

- b. The concept of biological (natural) ecosystems - with their interdependent segments, their constant change, and their dependence on and affect on their biological and physical environment.
- c. The concept of human ecosystems, and of the cultural, social, political, and economic aspects of them, in addition to the biological and physical aspects listed in (b) above.
- d. Concepts of Environmental Management.
  - (1) How we carry out and how we depend on the extraction, fabrication, and use of resources.
  - (2) How we have degraded the environment.
  - (3) How we must find ways to build a quality environment while at the same time we enjoy the use of the resources.
- e. Concepts of Our Cultural Institutions.
  - (1) Information on population problems.
  - (2) Understanding of our social, economic, and political structures, of how they work, of how they interact, and of how the individual may responsibly act to alter and improve the effectiveness of those structures and systems.

2. Specific Areas of Attitude Development.
   - a. Assist teachers and pupils in developing a concern for and a sensitivity to the quality of the environment, both natural man-made.
   - b. Develop a sense of individual responsibility.
   - c. Foster the growth of a desire - a motivation - to help resolve environmental problems.

3. Specific Areas of Skill Development.

   a. Develop in teachers and pupils investigatory skills involving critical thinking through:

      (1) identifying and defining a problem.

      (2) collecting information about the problem.

      (3) evaluating that information as to validity, relevance, bias, emotionalism, and accuracy.

      (4) devising experiments, studies, or investigations, collecting data, and properly using those data to draw conclusions or to make sound generalizations.

   b. Develop action skills in problem-solving through:

      (1) using the results of the investigating skills.

      (2) becoming well-informed.

      (3) developing and stating alternatives.

      (4) devising a plan of action.

      (5) putting that plan of action into operation, to contribute towards achieving the desired change.

SPECIFIC OBJECTIVES OF THE ENVIRONMENTAL EDUCATION PROGRAM

While the statement of overall objectives and of the components of them are part of the general philosophy under which our program operates, we obviously cannot and should not drown the sixth graders by trying to carry them the whole way. Those broad objectives apply to a total environmental education program (K through 12 or probably K through 16). In the elementary grades, the major emphasis is on helping children to discover facts and interrelationships, with as much "doing" and experimentation as possible. (See Appendix E)

To this end, and for the sixth grade program, the specific objectives are these (with added comments in parentheses of program ingredients that endeavor to meet each objective):

A. Develop in the children:

1. an understanding of the major biological and physical factors of ecosystems, both natural and man-made. (Studies of such ecosystems are part of the program.)
2. skill in measuring and observing those factors. (In their studies of ecosystems, the children do experiments, make observations, and measure factors of ecosystems.)
3. ability in collecting and recording data about environments. (These the children do in their studies.)
4. ability in drawing logical conclusions from the experiments, the field and classroom studies, and the compiled data. (To some extent the children do this.)
5. skill in devising and carrying out investigations of problem areas, with some evident action or follow-up that is within the powers of the children to perform. (This objective has not been

realized to much of a degree, but it still is one we hope to reach.)

6. a greater sensitivity to the nature and quality of the world around them.

CHAPTER II

CURRICULUM: SCHOOLGROUNDS AND WITHIN CLASSROOM

The curriculum of environmental education has many possibilities. It is stressed that it is not necessary for the classroom teacher to be in a system that has an organized environmental education program to take advantage of the outdoors. The following list suggested by Hammerman and Hammerman may wet your appetite:[8]

THINGS TO SEE AND DO WHEN THE LEAVES TURN COLOR

Study Themes:

What causes the autumn season?

Why do birds and some insects travel such great distances at this time of year?

How is the weather changing?

How are the plants changing? Why are they changing?

How are the animals preparing for the winter?

Things to Do:

Watch for flocks of birds and identify them, if possible.

Collect weeds for bouquets.

Collect seeds and leaves.

Watch caterpillars make cocoons. Put a cocoon in a box outdoors, and watch the moth emerge in the spring.

Observe and record seed travels.

THINGS TO SEE AND DO WHEN THE SNOW FALLS

Study Themes:

Where and how do insects and animals spend the winter?

---

[8] William Freeberg and Loren Taylor. Programs in Outdoor Education. (Minneapolis, Burgess Publishing Company, 1963). p. 22.

What constellations are visible in the night sky?

What causes the winter season?

How do plants survive the winter?

Things to Do:

Investigate deserted bird nests to see how they are constructed.

Follow animal tracks in the snow. Measure the tracks, and sketch them.

Sharpen senses on nature trails every season by specializing in listening on one trip, looking on another, touching, tasting, and smelling.

Identify animal tracks and homes.

Set up bird feeding stations. Observe and record the birds that feed on them.

THINGS TO SEE AND DO WHEN THE SAP FLOWS

Study Themes:

How is the weather changing?

What changes are taking place in plants?

What is soil? How does man use the soil?

How do plants and animals help one another?

How does man use plants and animals?

Things to Do:

Choose a tree and study all life around it as Spring changes.

Watch for the return of birds, first leaves, first flowers, first insects. Observe and record dates.

Watch the changing cloud forms in the sky. Sketch the different cloud types.

Watch a pair of birds building a nest. Observe them and record their activities.

Any realistic approach to making the best use of the out-of-doors as a teaching medium must give serious consideration to the unique features of the local area in which the learning activities are to be carried out. Several examples of this type of planning appear below.

THINGS TO SEE AND DO WITH HILLS AND VALLEYS

On your hike look for rocks that have scratches on them made by a glacier. These are called glacial striations.

Follow a gully to its source. Look for evidence of erosion.

Estimate the depths of the valleys in this area.

Make a map showing the southern limits of the glacier.

Can You Find Out?

What is a continental glacier?

Where and how do glaciers originate?

Where does a glacier pick up rocks, sand, and gravel?

What causes glaciers to melt?

THINGS TO SEE AND DO WITH ASTRONOMY

Things to Do:

Draw pictures and star maps of constellations so that you will be able to recognize them in the sky.

Read stories about the constellations.

Photograph star trails by taking a two-hour time exposure of the northern hemisphere.

Can You Find Out?

What constellations will be appearing in the sky during the time you are at the Environmental School? Remember that the date and hour of the observation is important, since constellations appear to move across the sky as the earth rotates from west to east.

Will the moon be visible during your stay at the Environmental School? If so, what phase will it be in?

Will any planets be visible at this time?

THINGS TO SEE AND DO WITH ROCKS, MINERALS AND FOSSILS

Things to Do:

Hunt for rocks, minerals and fossils.

Test various specimens to find differences in hardness, color, luster, streak and fracture.

Can You Find Out?

What are the three main classes of rocks?

How do rocks change from one kind to another?

What is a mineral?

How are fossils formed?

THINGS TO SEE AND DO WITH BIRD LIFE

Things to Do:

Investigate many bird books to find out what particular birds you should see at this time of year.

Collect pictures and make sketches of birds that you expect to see. This will help you to recognize them.

Find an old, unoccupied bird nest. Examine it closely and extract a sample of each kind of material which the bird has used in constructing it.

Can You Find Out?

What birds eat so that you may maintain a feeding station outside your classroom?

Why certain birds migrate during the spring and the fall of the year?

The future of environmental education, the extent to which it receives acceptance and becomes a vital force in America's educational program will depend upon how well the classroom teachers - you and you - and you accept this unique classroom of the outdoors and employ direct learning experiences for your children.

CURRICULUM: CAMP SESSIONS

In Appendix B is the detailed program of the children's sessions of the Spring 1971 Program. The programs of all nine (9) sessions were the same.

1. Field Instruction and Investigations.

   The children are actually at the camp approximately 48 hours (from about 7:00 p.m. of one day to about 7:00 p.m. two days later). In that time, they receive about ten (10) hours of field instruction, in four (4) different instructional areas through which the children rotate. These four subject areas are briefly described below:

   (a) Ecosystems Studies.

      (1) Ecology of a stream. The children carry out collections, observations, and measurements of a stream, followed by a discussion of factors of an aquatic habitat and conclusions of the level of and reasons for the particular productivity found.

      (2) Ecology of a small area of land. A transect study is carried out, with emphasis on the kinds and densities of plants, and speculations on the reasons for the several different environments discovered.

   (b) Geological Studies.

      The children collect, examine, test, and classify various kinds of rocks. They discuss the origins of the rocks, then study the overall geologic nature of the local valley, and the many geologic forces at work. And these geologic aspects are then related to man and his use of the land.

(c) Geographic Studies.

(1) The children have an opportunity to see and to use various weather instruments, and to compile weather data charts.

(2) Spacial and directional concepts are explored, through the uses of compasses, pacing, very simple surveying and mapping tools, creation of simple maps, and discussions of the influence of geographic factors on man's history and present land use.

(d) Plot Studies (studies of environmental factors of land). In this unit the children (in groups of 3 or 4) actually carry out a detailed study of a small (3 ft. X 3 ft.) plot of ground. They (1) map the plant cover, (2) map the animals or animal signs, (3) determine elevation change, (4) stake out contour lines, (5) measure slopes, (6) measure surface and subsurface temperatures, (7) measure soil compactness, (8) measure soil permeability to water, (9) expose and map a small soil profile, (10) carry out a simple particle-density analysis of the soil which yields its percent composition, (11) record all these data on their maps, and (12) discuss throughout the investigation, the significance of the several factors to the plants and animals of that tiny area and the significance of those factors (on a broader scale) to man.

2. Other Instructional Components.

(a) First Aid.

Each of the children's sessions had a medical doctor in camp at all times. The doctor for each session put on two first-aid instructional sessions, and every child attends one or the other. The doctors have done an outstanding job of demonstration, discussion, and communication with the children, and on their level.

(b) Art

For the Spring 1971 Session, Dr. Helene Northcutt of the EMC Art Department, using a class of her advanced students, had at least two art students assigned to each of the children's sessions. Each child had one (1) hour of creative art experience, and an additional period (in free time) for completing projects. The art instruction in Spring 1971 was well-organized, well-staffed, well-run, and successful.

3. Recreation.

Various blocks of time in the children's camp program were for "free time", during which numerous recreational activities occurred (baseball, volleyball, hiking, and others) on an optional basis. For these periods, EMC students were in charge who were in camp as counselors and who had Physical Education training. The Health, Physical Education, and Recreation Department of EMC was most cooperative in helping make arrangements and in manning those activity periods.

4. Music and Dramatics.

While in previous years the camp sessions have had the services of music instructors from School District #2, in the Spring 1971 Program, the planning and presentation of the evening campfire programs were assigned to each teacher whose classroom was in attendance. In most instances, the teacher and the children had planned and rehearsed their contribution before coming to camp, and had made it part of the in-classroom pre-camp music and creative dramatics program in their school. Those evening programs were very enjoyable for all concerned, and added significantly to the spirit and success of the total camp program.

LEARNING POSSIBILITIES WITHIN THE ENVIRONMENTAL CLASSROOM

Although the program in Billings is well structured for the time allotted, there are other possibilities that could be considered. Education today is constantly growing, revising, and expanding curriculum areas. Thus, these learning experiences given are only guidelines that classroom teachers can use or should be free to alter as the need arises.

ARITHMETIC:

. Figuring finances for coming to the Environmental Education School.
. Planning cookouts, amounts needed and cost of food.
. Estimating distances and time.
. Measuring areas of land.
. Measuring circumference of trees.
. Planning time schedules.
. Making scale drawings.
. Estimating location of stars.
. Finding wind velocity.
. Finding heights of trees.
. Various ages of items found.
. Estimating speed of the river.
. Geometric shapes of nature.
. Averaging barometer and temperature readings.

ART:

. Sketching and drawing of various scenes.
. Using native materials (clay, grasses, weeds, berries) for pottery, floral arrangements, mats, pictures, etc.
. Various colors and shades found within nature.
. Creating table center pieces.
. Noticing design in nature.
. Photography.
. Plaster casts.
. Leaf printing.
. Maps and scale drawings.
. Cloud and tree shapes, formations.
. Sketches of leaves, flowers, trees, tracks, etc., for identification purposes.

MUSIC:

. Night sounds.
. Bird calls.
. Writing new songs.
. Musical instruments from nature.
. Singing around campfire.
. Creative and square dancing.
. Frog calls.

HEALTH, SAFETY, AND NUTRITION:

- Using safe practices in the out-of-doors.
- Planning equipment and personal clothing lists.
- Planning proper food for cookouts and a balanced meal.
- Independent health habits.
- Dressing properly and adequately.
- Setting tables and serving as hosts and hostesses for meals.
- Making beds.
- Doing good housekeeping tasks.

LANGUAGE ARTS:

- Reading reference books.
- Planning the weekly program.
- Taking field notes.
- Keeping a Log Book of activities of the week.
- Keeping a new vocabulary list.
- Reporting on special experiences to the entire class.
- Listening to follow directions and identify sounds.
- Evaluation sessions.
- Labeling and identifying specimen.
- Demonstrations.
- Relating experiences orally to other groups upon returning.
- Writing stories, plays, and poems motivated by experience.
- Writing of poems and creative stories.
- Story telling.

PHYSICAL EDUCATION:

- Hiking.
- Group games and square dancing.

SCIENCE:

- Collecting and mounting specimens (rocks, seeds, plants, insects, etc.)
- Leaf, bird, or animal identification, habits and habitat.
- Making weather observations and predictions.
- Build terrarium and aquarium.
- Finding animal homes, tracks, or food.
- Star gazing and observation.
- Erosion prevention and soil samples.
- Use of microscopes and hand lens.

SOCIAL STUDIES:

- Studying the history and geography of the Environmental Experience area.
- Skits on Indians and Pioneers of this area.
- Maps, models of the area and map reading.
- Solving common problems of living together by planning cooperatively and accepting responsibility.

CHAPTER III

ADMINISTRATION

At the head of the environmental experience is the camp director. His jobs are many and involve much planning and detail. He must arrange for transportation, food and lodging. He must account for the students to include being present at their classes and for their general well-being.

Perhaps no one group of people is more important to the camp director than the tutor-counselors. Appendix F gives a breakdown of the tutor-counselor assignments in past sessions.

Tutor-Counselors

Well-oriented and capable tutor-counselors are essential. They have an opportunity to do a great service to the boys and girls participating in the program. Unless they accept the job in this light, they will be doing an injustice both to the children and themselves.

Basically the tutor-counselor is accepting a challenge to help in the wholesome development of the campers under his direction. Naturally, we recognize that every child should enjoy fully his stay at camp. However, the tutor-counselor should consider a child's needs more deeply than just having a good time. In order to help in this development process, the tutor-counselor should try to understand some of the basic needs of all children. The following are needs which every child must in some measure receive satisfaction to insure a well-rounded life.

1. The need to feel that he is liked and accepted by others.
2. The need to feel a successful "sense of accomplishment." In other words, to feel he has done something worthwhile.
3. The need for healthful physical development through proper

exercise, nutrition, and hygienic living habits.

4. The need to learn useful recreational and practiced skills; to develop appreciation and enjoyment of camping skills, naturecraft hobbies, hiking, etc.
5. The need to develop a sound attitude toward his companions; to understand and accept a creed of tolerance, fair play, unselfishness, and above all, a clear concept of the Golden Rule.

As pointed out in the previous paragraphs, the tutor-counselor's major responsibility is directed to the overall development of the campers. More specifically, each tutor-counselor should keep the following areas of responsibility in mind. His dependability in consistently carrying them out will have a large bearing on the success of the camp.

1. Appearance.

   Appearance should be neat and clean in person and dress. How else can we impress the values of personal hygiene to the campers?

2. Setting Example.

   Setting an example in all of his personal behavior. The leader cannot "lead" who does not do so by example. The tutor-counselor's manners and eating habits are certain to set the pattern for his cabin at the table. His example with his own bunk and personal possessions in the cabin will set the expectancy for tidiness. His observance of camp rules, such as camp boundaries, will be closely observed by the children. His language will be reflected by impressionable youngsters!

3. Doing More Than Your Share.

   His readiness to do his share and a little more in all camp tasks is very desirable. One of the finest things that can be said about a leader is that "He is always willing to do more than his share." There is always plenty to do in a camp which might be easier to avoid. In addition to obvious tasks associated with camp clean-up, there are always tasks around camp which need some willing hands.

4. Camp Routine.

   The tutor-counselor has a constant responsibility to aid in the smooth running of camp daily routine and program. Being on time is imperative. Success of the program depends upon getting things done on time. Tutor-counselors should always be at each activity or gathering ahead of time, after first being sure that their campers are accounted for.

5. Assignments.

   In addition to his cabin group, each tutor-counselor has other assignments assisting with the camp program. Each tutor-counselor should accept his role in the program seriously. Prepare ahead of time so that your part of the program will be a success. A sample of the Kampus Kapers is enclosed in Appendix G. This schedule is used to designate duties at camp. The camp director designates the duties.

Cabin Assignments

Cabin assignments are made with the best interests of the students in mind. This is best accomplished by utilization of a sociogram. (See Appendix H) It is essential that a student is not assigned a cabin with another student whom he has indicated he does not wish to have in his cabin. It is also important to assign a student to a cabin with at least one of his friends. If these simple rules can be adhered to in making cabin assignments, the camp will be more enjoyable for the students.

Cabin Clean-Up

In order to be democratic, the tutor-counselors should let the students help make rules in regard to the cleanliness of the cabin and area. However, the following rules are essential:

1. All clothes in cabinets to be neatly folded. Keep your cabinet neat.
2. Soiled clothing may be kept in a laundry bag, or suitcase.
3. Jackets and hats should be hung up neatly.
4. Shoes placed side by side uniformly in cabin.
5. All personal equipment such as soap, toothbrush, comb, flashlight, pocket knife, craft supplies, etc., are to be kept in a cabinet or suitcase - not hidden under a sleeping bag or elsewhere.
6. Bunks, sleeping bags and suitcases dusted and neat.
7. Floor and porch swept.
8. All papers and anything which is not a part of nature should be picked up from within a twenty-five (25) foot radius of cabin. THE MOST IMPORTANT PART OF YOUR CABIN CLEAN-UP TAKES IN KEEPING HIS OWN BUNK AND PERSONAL POSSESSIONS NEAT AND CLEAN AT ALL TIMES!!!

Mess Procedures

The dining hall has three (3) main functions:

1. To provide nourishing and well-balanced meals.

2. To teach socially acceptable mealtime behavior.
3. To help children learn to appeciate and enjoy food.

The mealtime procedure is as follows:

1. When children arrive at the table, all stand behind their chairs to sing grace.
2. Good posture for all present is expected.
3. Each table of children will line up for food when the camp director signals. The camp director designates the order in which the groups line up.
4. Children are allowed plenty to eat, but they are expected to eat all they take.
5. No one eats until all are served and seated at their respective tables.
6. Tutor-counselors are expected to be seated with their assigned groups.
7. Tutor-counselors will set the example for the proper use of the eating tools, use of napkin, and pleasant conversation. Students are expected to follow.
8. Seconds are allowed after everyone has had their first serving and upon direction from the cooks.
9. When children have finished eating, they remain seated until all or nearly all others have finished.
10. Normally each table is responsible for their own dishes. The cooks will demonstrate the method for washing dishes and storing garbage.

Camp Physician

A medical doctor is present for those who become sick or need special medication. Up to this point, area medical doctors primarily from the Billings Clinic, have graciously given their time for the success of this program.

Sick call is normally held between 8:00 and 9:00 a.m. in the morning. However, a medical doctor is always on hand should an emergency arise. The medical doctor also gives the first-aid instruction as a regular part of the program.

CHAPTER IV

A GUIDE FOR ESTABLISHING AN ENVIRONMENTAL EDUCATION PROGRAM

Recently Dr. Helen Grilley, Professor of Education, Eastern Montana College, Billings, Montana, had an opportunity to do some research in the field of environmental education. She prepared an instrument for evaluating environmental education programs. The instrument included the principles, objectives, methods used, which included pre-planning, follow-up, and evaluation, and the curriculum experiences of the seven subject areas. The instrument was sent to sixteen (16) selected programs in the United States. The results revealed that all four areas, principles, objectives, method, and curriculum experiences were accepted by a majority of the leaders of the selected environmental education programs.

The instrument emphasized an inter-disciplinary approach with seven (7) subject areas being represented. Science had many activities represented in the related areas of earth science, geology, astronomy, ecology, wildlife, forests, plants, and soil. It is interesting to note that in such a wide expanse of country, from the Atlantic to the Pacific Oceans, high agreement exists in environmental education practices.

The following list of principles, objectives, and follow-up procedures as developed by Grilley, played an important role in the origin of the program in Billings.

These guides follow for the reader's information.

Principles of the Environmental Education Program

1. The program should be planned to meet the general aims and objectives

of education and be an integral part of the regular curriculum.

2. The general aims and objectives should be translated into specific aims and objectives.
3. The program should be planned purposefully with respect to available leadership, in relation to environment and facilities, and in the consideration of the needs and the interests of children.
4. The program should emerge naturally with informed direction out of the local school situation and be planned by children, parents, teachers, and administrators.
5. The program should be administered by administrative personnel or a coordinator and teaching faculty under the auspices of the local board of education.
6. The financial support of the program should be derived from school funds, but the family should assume the cost of the food while the children are at the environmental center.
7. Adequate pre-planned educational activities, and follow-up, are basic to an effective environmental program.
8. Total educational growth and guidance can best be achieved under responsible leadership by close contact with groups of approximately ten (10) children.
9. The classroom teacher is a key figure in developing plans, establishing goals, and assuming the leadership role.
10. Direct learning experiences, capitalizing on many senses, and providing for continuous and progressive levels of attainment, should be centered in the out-of-doors.
11. The program should use native materials effectively, provide direct experiences with living things, and promote an understanding of the use of natural resources.

12. The program organization should be flexible. The environmental learning experiences should cut across interdisciplinary lines and relate to or complement general subject matter areas.

13. The program should be guided by the philosophy of participating in those activities that can best be learned or can only be learned in the out-of-doors.

14. The best practices in mental health and fitness should be an integral part of the environmental program.

15. The program should serve the local community whenever and wherever possible.

Objectives of the Environmental Education Experience

1. Work experiences are provided in the following ways:

____Participating in purposeful group projects.
____Performing work with tools.
____Performing work duties.
____Participating in school subjects related to life experiences.

2. Health and physical fitness are developed in the following ways:

____Enjoying the outdoors in a tension-free environment.
____Practicing personal cleanliness.
____Learning to enjoy a variety of foods.
____Maintaining regular hours for eating, sleeping, and elimination.
____Wearing proper clothing.
____Participating in wholesome exercise, such as hiking.
____Maintaining rest hours.
____Maintaining clean premises.
____Practicing individual and group safety.

3. Democratic procedures are practiced in the following ways:

____Accepting duties and rights.
____Participating in sharing and planning involvement.
____Involvement in purposeful work experience for group value.
____Practicing optimum freedom.
____Acceptance of loyalty to democratic ideals.
____Developing self-discipline.

4. Group living experiences are provided in the following ways:

____Participating in experiences that center around basic needs.
____Accepting group living and associating informally.
____Developing respect for the individual.

5. Understanding of different kinds of work is developed in the following ways:

____Observing work experiences in park management.
____Observing work experiences in agriculture.
____Observing work experiences in watershed management.
____Observing work experiences in cooking and maintenance.

6. Science concepts are developed in the following ways:

____Developing an inquiring mind.
____Developing an understanding of the ecology of the area.
____Developing an understanding of resources in the area.
____Developing an understanding of the geology of the area.
____Developing an understanding of conservation practices needed in the area.
____Developing an understanding of astronomy.

7. Aesthetic appreciation is provided in the following ways:

____Participating in creative writing experience.
____Performing creative art work.
____Enjoying campfire singing.
____Participating in singing grace.
____Participating in talent programs.
____Developing an awareness of the surroundings.
____Developing an awareness of beauty.

8. Worthy use of leisure time activities is provided in the following ways:

____Participating in free reading.
____Enjoying suitable games.
____Participating in hiking opportunities.
____Participating in waterfront recreation.
____Performing in square dances.

9. Desirable qualities of character are developed in the following ways:

____Practicing courtesy.
____Developing pride in cleanliness of living quarters.
____Developing a cooperative spirit.
____Encouraging high ideals.
____Sharing responsibility of assigned duties.

10. Basic fundamental skills are practiced in the following ways:

____Reading for specific purposes.
____Writing of purposeful activities for bulletin board or newspaper.

____Discussing observations.
____Reporting items of interest to the group.
____Writing letters to parents and friends.
____Taking notes during learning activities.
____Listening to the ideas of others.
____Working practical arithmetic problems.
____Learning to spell words introduced through first-hand experiences.

The Environmental Education Laboratory School Method

1. Children participate in the planning, execution, and evaluation of the total program.
2. Activities are integrated around the problems inherent in living together.
3. Principles are stressed rather than detailed facts.
4. The natural environment is used for observation, discovery, and direct learning experience.
5. The multisensory approach of feeling, looking, smelling, hearing, and touching provides direct learning experiences.
6. Competent resource personnel is used.
7. Purposeful guidance is provided during mealtime, during planned activities, and during free time.
8. Ecological field study of the area is practiced rather than just collecting and identifying.
9. A cross section of as many resources of the area as possible is presented.
10. Utilizing natural recreational activities, such as outdoor skills is given preference.

Pre-planning for the Environmental Education Experience

1. Orientation for teachers is provided in the following ways:

____A handbook is made available to participating teachers.
____Planning meetings for participating teachers are held.

2. Orientation for parents is provided in the following ways:

____Parent information letters are sent home.
____Permission slips are secured from parents.
____Room group meetings with parents are held.

3. Orientation for children is provided in the following ways:

____A check list of equipment is sent home.
____A fee is paid in advance.
____A physical examination is given by the school nurse.
____The objectives of the program are discussed.
____A film or slide is shown.

4. Living together harmoniously is stressed by discussing the following items.

____The importance of accepting responsibility is discussed.
____The importance of respecting the rights of others is emphasized.
____The value of working together for a common cause is discussed.
____The value of planning together is emphasized.
____The importance of practicing courtesy toward others is discussed.
____The importance of establishing standards of conduct on the buses is emphasized.
____The importance of practicing orderliness is discussed.

5. Subject matter preparations for activities of the environmental laboratory school are made in the following areas.

____Pre-planning in arithmetic is practiced.
____Songs of the outdoors are learned.
____Needed art techniques are practiced.
____Health habits are discussed.
____Needed science concepts are developed.
____Language arts skills are reviewed.
____The history of the area is studied.

Classroom Procedures Before or After the Environmental Education Experience

1. Basic concepts are discussed.

2. Plays or skits are written and presented.

3. Panel discussions are held.

4. Experiences are recorded in diaries.
5. News stories are written for local papers.
6. School newspapers are published.
7. Demonstrations are held.
8. Public speaking groups are sponsored.
9. Bulletin boards are prepared.
10. Window displays in local store windows are made.
11. Letters of appreciation are written.
12. Specimens are classified.
13. Classroom displays are made.
14. Written reports of environmental experience are made.

Preparation for a Field Trip

The following steps should be taken in preparation for every trip:

A. On the part of the teacher.

  1. Before planning a trip with children, make sure, first of all, that the trip is the best possible means of attaining the desired ends. Then go over the ground to be covered, planning the best route. Plan for the methods of transportation and the duration of the trip. Plan for assistance, if it will be needed.
  2. Make contact with the persons whom the children are to meet, explaining the purposes of the trip. If necessary, this may be done by telephone or by letter, but personal contacts usually yield better results.
  3. Secure the approval of all authorities involved, at school and at the place to be visited.
  4. Explain the purpose of the trip to the parents and secure their

permission.

5. Arrange for any safeguards needed, such as special policemen at unusually busy corners.
6. Provide carfare or other assistance needed by children who cannot afford the expense. Financial help of this type is often available through the Parent-Teacher Association.

B. On the part of the class.

1. Have the group, in discussion, set up definite goals. It is often advisable to do this by listing specific questions to be asked and answered and definite things to look for and examine.
2. Have the group plan definite responsibilities for each INDIVIDUAL or small group in gathering information and in conducting the trip.
3. Have the class plan the ways and means of any notetaking, photographing, or sketching that is required or that will add to the value of the trip.
4. Help the group to use discrimination in making their plans, so that they will not try to cover too much ground at one time.
5. Work out with the children, in discussion, the procedures and conduct to be used while crossing streets, while riding in vehicles, or while at the place to be visited. Methods of transportation are thoroughly discussed to avoid last minute confusion.
6. Build up with the children standards of courtesy conduct to be observed.
7. Plan the grouping of children, if needed, with the assisting adults or with child leaders, making sure that every child in the group knows to whom he is responsible. Many teachers have found that to give charge of small groups to the more responsible pupils

develops leadership in these and good citizenship in the other children.

C. Follow-through.
  1. Group discussion in the classroom.
    a. Critical evaluation of the place visited.
    b. Supplementing and correcting incomplete or hazy understanding.
    c. Introduction of new problems.
  2. Creative Projects.
    a. Drawing, poems, stories, construction, bulletin board displays, diaries, etc., based on the trip.
    b. Writing a letter of thanks to the guide, etc.
  3. Tests to determine.
    a. Information gained.
    b. Attitudes formed.
    c. Generalizations.
  4. Reports from pupils.
    a. Informative general reports - the overall subject had been previously assigned.

D. Evaluating - before and after.
  1. Before.
    a. Is this destination the best choice for this particular teaching purpose?
    b. What plans need to be made by teacher and pupils?
    c. Is there reading material on this particular pupil level?
    d. Is the time involved likely to prove worth the undertaking?
    e. What relationship can this trip have with other pupil experiences?

- f. What emotional effects is the trip likely to have on the pupils?

2. After.
   - a. Did the trip serve the purpose?
   - b. Were attitudes affected in the expected manner?
   - c. Did the trip stimulate the pupils into new activities?
   - d. Did it develop in them a spirit of inquiry and curiosity?
   - e. Has the trip had any final effect on pupil conduct and behavior?

E. Additional questions for evaluation.

1. Will it provide an adequate sampling of the total process or body of facts?
   - a. Will it correct misconceptions?
   - b. Were attitudes affected in the expected manner?
   - c. Will it present the most desirable examples of the process or facts?
   - d. Will some physical condition (e.g., excessive noise) possibly overshadow the important factors to be observed.
   - e. Will facilities be available for the answering of questions and further explanation (e.g., guide or motion picture)?
2. Will it be worth the time, expense, and effort involved?
   - a. Could some more economical medium be used as effectively?
     - (1) Is adequate transportation available?
     - (2) Can the class as a whole afford any pupil expense involved.
     - (3) Can the trip be made within the time available?
   - b. Will the experience be new to the majority of the class?
   - c. Are there health or safety risks involved?

   d. Will serious problems of pupil management be involved?

3. Will the resulting community relations be constructive?
   a. Can the purpose be realized without undue inconvenience to pupils, parents, teachers, and places visited?
   b. Will the selection of places to visit produce ill feeling in the community (e.g., visit to a chain as against a corner grocery)?
   c. Will the trip probably have parental and community support?
   d. Will visits by numerous groups tend to bring about more efficient service on the part of the organization visited?

Program Evaluation

Measuring the children's growth in understanding, in sensitivity, and in various skills is an item of concern for our program. It is intended that future programs operate utilizing behavioral objectives. The following items have served as guidelines in the past:

1. Questionnaires on attitudes and interests are filled in by the children and teachers.
2. Questionnaires are filled in by the parents.
3. Sociograms of the children are taken before going and after returning to evaluate social growth.
4. Interest inventories before going and after returning are given.
5. A nature or other type of diary is kept by the children while at the environmental laboratory school.
6. The teacher evaluates the concepts the children gained by observation during instruction at the enviromental laboratory school.
7. An evaluation form of changes needed in the program is recorded for the following year.

The Role of the Schools in Producing Responsible, Environmentally Literate Citizens

When one examines most modern school curricula, one finds that much "education" is vocationally or academically oriented - that is, we teach specific knowledge and skills designed to help a person become self-supporting. These are important; however, we do not pay enough attention to the development of critical thinking, problem-solving, consideration of raw data, examination or development of alternatives, understanding of cause and effect, identifying issues, evaluating solutions, developing belief and attitudes, building a sense of individual responsibility, becoming sensitive to one's environment, understanding the political process through which citizens may bring change, and developing plans for and carrying out actions aimed at the solution of problems.

These areas just listed offer to schools an exciting, a significant, and a largely-untapped role in education. Were these components to become a part of the schooling process, we would be helping to produce citizens having a motivating concern for and factual knowledge of the relationship and responsibility of man to his environment. Further, those citizens would have the knowledge and skill of how to get at the root of a problem and to move towards a solution.

A significant role of the school system can therefore be to help young people understand their total environment, help them learn (through investigations of problems on their level) how to find out about the essential ingredients of problems, and, lastly, help them develop the attitudes and abilities that lead to responsible citizenship exercised in actions to contribute to solving problems.

BIBLIOGRAPHY

Brandwein, Paul. Pinchot Institution for Conservation Studies.

Brennon, Matt. Pinchot Institution for Conservation Studies.

Eby, Frederick. The Development of Modern Education. New York, Prentice-Hall, Inc., 1952.

Freeberg, William H., and Loren E. Taylor. Programs in Outdoor Education. Minneapolis, Burgess Publishing Company, 1963.

Gabrielson, Alexander M., and Charles Holtzer. The Role of Outdoor Education. New York, The Center of Applied Research in Education, 1965.

Hammerman, Donald E., and William M. Hammerman. Teaching in the Outdoors. Minneapolis, Burgess Publishing Company, 1964.

Smith, Julian. Outdoor Education for American Youth. Washington, D. C., American Association for Health, Physical Education, and Recreation, 1959.

Stapp, William. School of Natural Resource, University of Michigan, Ann Arbor, Michigan.

APPENDIX A

Table I

Summary of Environmental Education Training Workshops

Quarter	Course #	Env. Ed. Workshops		Counsellor Training Workshops
		# Undergrads Students	# Grad Students	# Students
	(Note 1)		(Note 2)	
Spring 1969	Ed 493	14		
	Ed 593		34	
	Sc 302-2	17		
	Ed 491	2		
Fall 1969	Ed 493	1	26	
Spring 1970	Ed 493	1	21	
	Ed 493			45
Fall 1970	Ed 493	48	12	
	Ed 491	2		
Winter 1971	Ed 290			67
	Ed 493			42
Spring 1971	Ed 493	29		
	Ed 593		23	
	Sc 493	4		
	Ed 490	4		
	Ed 290			25
		122	116	179

Notes: 1. The variety of course numbers is not significant.

2. All in this column received graduate credit.

Table II

Summary of Billings Public Schools, and Record of Teachers on contract 1970-71 who had at some time taken the Environmental Education Workshop

Name of the School (all data are for 1970-71 School Year)	Total # of Teachers and Admin.	Total # who had an E.E. Workshop	Total # of 6th grade rooms	# of 6th grade rooms at Camp S '71	Total # children at camp S '71	Total # Teachers at camp S '71	Principal has taken E.E. Wksp.
Elementary Schools							
Bench	13	2	2	--	--	--	no
Bitterroot	21	6	3	3	89	3	no
Boulder	19	3	3	3	95	3	no
Broadwater	21	5	3	--	--	--	yes
Burlington	20	2	3	--	--	--	yes
Central Heights	20	5	4	4	99	3	yes
Eastern Elementary	11	3	1	1	30	1	yes
Garfield	28	2	1	--	--	--	no
Grand	16	5	5	5	134	5	no
Highland	17	4	4	4	98	3	yes
McKinley	13	1	2	--	--	--	no
Meadowlark	20	4	1	1	22	1	yes
Miles Avenue	21	4	0	--	--	--	yes
Newman	16	3	2	2	62	2	no
North Park	16	2	2	--	--	--	no
Orchard	12	3	2	--	--	--	no
Poly Drive	19	4	3	3	93	3	no
Ponderosa	19	5	3	--	--	--	no
Rimrock	13	5	3	3	74	3	yes
Rocky Elementary	5	1	0	--	--	--	no
Rose Park	19	7	3	3	68	3	yes
Shiloh	4	1	0	--	--	--	--
Taft	13	4	1+	1+	38	2	yes
Washington	20	2	3	--	--	--	yes
Totals for Elementary Schools	395	83	54	33	902	32	11 of the 24 are yes

Others	Total # Teachers & Admin.	# who have had an E.E. Wksp
Central Admin. Offices	53	4
Billings Senior High	104	2
Billings West High	115	0
Lewis & Clark Junior High	79	2
Lincoln Junior High	70	1
Riverside Junior High	49	0
Vo-Tech Center	16	0
Will James Junior High	50	3
	536	12

Spring 1971
Teachers' Workshop in Environmental Education
Introductory Information

Background, Objectives, Unifying Concepts

A. Background

This spring is the fifth year of the Environmental Education Program in Billings. This spring's Teachers' Workshop is the eighth of its kind to be offered. It is designed to help teachers become able to work in and with the rapidly expanding Environmental Education program in the public schools.

Immediately following this Workshop this spring, about 900 sixth graders from District #2 will each have a two-day camp experience, with solid field instruction in Environmental Education. Teachers of those sixth grade rooms selected for this spring have all had or will have had the Environmental Education Workshop, and will work with the workshop staff at camp when the children are at camp.

B. What the Workshop strives to do:

The objectives of this Workshop are these:

1. to help teachers become aware of the environmental problems we face.
2. to help them understand the challenge, responsibilities, and opportunities of Environmental Education for all grade levels.
3. to present fundamental information on basic resources and on man's handling of those resources.
4. to give practical illustrations of and actual experience with activities and studies which will contribute to a child's understanding of his environment and his relationship to it.
5. and to learn how to use the Process Approach as a strong learning tool utilizing a maximum of actual student participation.

C. Unifying Concepts

Throughout this Workshop, and throughout a teacher's efforts in Environmental Education there are some simple yet absolutely fundamental unifying concepts. These are as follows, and should be kept in mind constantly:

1. Living things are interdependent with one another and with their environment.
2. All organisms or populations of organisms are the product of their heredity and of their environment.
3. All organisms and environments are in constant change.

Spring 1971

Teachers' Workshop in Environmental Education

Info Sheet #1

Registration Information

A. Course Information

Course Title to use in registration: Env. Ed. Workshop for Teachers

Course Number: Ed 493 (for those without a B.S. or B.A. degree -- all undergraduates)

Course Credit: 3 credits

Pre-requisite: none

B. Registration Information (be sure you use the correct category)

1. For undergraduates who now (Spring 1971) are already registered as EMC students

   File an Add Card with Dr. Clark, then pay fees as in C below.

2. For graduate (post-bachelors degree) students who have previously attended EMC at any time.

   File a pink "Re-admission" card, and pay fee below.

3. For graduate (post-bachelors degree) students who have never attended EMC.

   File the completed Application for Admission, and pay fees below. The usual $10 fee for first admission to EMC is NOT charged for this type of admission.

C. Fees

Fees	Instructional Fee	May 8, 9 Field Camp Fee	Total
(a) For students not now (Spring 1971) full time EMC students	57.00	15.00	72.00
(b) For students who now (Spring 1971) are full-time EMC students	0.00	15.00	15.00

Make the $57.00 check payable to Eastern Montana College.

Make the $15.00 check payable to Env. Ed. Camp Acct., EMC.

D. Class Card

Your add card or admission documents will be turned in to the Registrar's Office. Packets will be made up, and ready for the second session. At the second session you will fill out the packet cards, and the class card will be inserted. For students using the Add Card, be sure this card is turned in to Dr. Clark -- not to the Registrar's Office, and he will then deliver it plus a class card to the Registrar.

Spring 1971

Teachers' Workshop in Environmental Education

Info Sheet #2

Time Schedule

Thursday, March 25 -- 7:30 p.m. - 9:30 p.m.
Multipurpose Room, EMC
(a) Course Registration; (b) Introductory Comments -- Clark,
(c) Film and Discussion -- Grilley, (d) the Discovery/Inquiry Method -- Clark

Thursday, April 1 -- 7:00 p.m. - 9:00 p.m.
Multipurpose Room, EMC
Schoenthal in charge. Basic concepts in Ecology.
Simple tools, studies, experiments for exploring ecosystems -- natural and manmade.

Thursday, April 8 -- 7:00 p.m. - 9:00 p.m.
Multipurpose Room, EMC
Clark in charge. Soil, sir, and water -- the basis of all life.
Simple tools, studies, experiments for exploring the ground.

Thursday, April 15 -- 7:00 p m. - 9:00 p.m.
Multipurpose Room, EMC
Andersen, Mares, Grant in charge.
Simple tools, studies, experiments for exploring the geological, geographic, and climatic factors as they affect natural or man-made ecosystems and man's use of the land and its resources.

Thursday, April 22 -- NOT A CLASS SESSION. This is for staff only, as a final planning session for the April 24 field day. Staff is to meet at Taft School at 7:00 p.m.

Saturday, April 24 -- 8:30 a.m. to 3:30 p.m.
All day field trip, entirely within the environs of Billings.
This will be held regardless of the weather (even snow). Come dressed properly for the weather and for the field.
Bring your own lunch. Hot coffee will be supplied.
Adequate rest stops will be provided.
This is a trip by bus. MEET at 8:15 a.m., in parking lot south of the EMC Campus School.

Thursday, April 29 -- 7:00 p.m. - 9:00 p.m.
Multipurpose Room, EMC
Erickson, Heiser, Grilley in charge.
Implementing an environmental education program.
Aspects of planning, curricula, management.

Saturday, May 8 and Sunday, May 9 -- Field Weekend
ALL are to be at the Lion's Camp, outside of Red Lodge, by 7:00 a.m., on Saturday for breakfast and the basic information on the Field Session, and to stay through to the end of the field session about 3:30 p.m. on Sunday. Full information (program, equipment, etc.) will be issued in a subsequent Info Sheet.

Spring 1971

Teachers' Workshop in Environmental Education

Info Sheet #3

The Basis of Grading

We are unfortunately required to assign grades to all teachers and students taking this Workshop for credit. In the past we've tried various devices, such as the unit studies, some examinations, various papers, and so on. Those methods have been somewhat criticized by the students, and justifiably.

This session, the major emphasis of each session will be on individual student participation, at every session. We plan to involve everyone actively, with feedback to us in the form of the experiments, observations, interpretations, ideas, notes, and other things generated in each session.

To this end, and so that there will be no confusion, the following basis of grading has been jointly set up by the staff -- including the backup staff, all of whom recently have been through a teacher workshop. (Note that there are no blanket or automatic grades.)

Maximum grade of C -- may miss no more than two of the evening sessions, but must attend the April 24 field trip and the May 8, 9 field camp. Must fully participate in all sessions attended.

Maximum grade of B -- Full attendance (at all sessions), and full participation as determined by the instructors.

Maximum grade of A -- Full attendance (at all sessions) and full participation as determined by the instructors, plus satisfactory completion of one of the following three alternatives

(1) Problem in applying Env. Ed. to a school situation.

or (2) A professional paper dealing with Env. Ed.

or (3) Teaching units covering three areas.

For these three alternatives, specific guidelines and criteria of acceptability will be issued by, respectively, (1) Clark, (2) Grilley, and (3) Schoenthal. Each final paper shall be read and judged by no less than three of the faculty. To be accepted, all papers must be turned in to Dr. Clark's office (room 103, 105, Science Building, EMC) on or before May 20. Course grades will be issued by at least the end of the quarter.

Spring 1971

Teachers' Workshop in Environmental Education

Info Sheet #4

PROGRAM of the RED LODGE FIELD SESSIONS

Objective: to have each person experience and understand the field program that the sixth grade children go through.

Saturday, May 8

Be at the Lions Camp, south of Red Lodge, by 7:00 a.m.

7:15 a.m.	Breakfast. Then get settled in a cabin.
8:15	Total group will be broken into four smaller groups. See group assignments of General Info Sheet #5.
8:30 - 11:00	Group A - Schoenthal Group B - Andersen Group C - Mares and Grant Group D - Clark (groups can take a coffee break in the middle)
11:15	Lunch
12:00 - 2:30 p.m.	Group B - Schoenthal Group C - Andersen Group D - Mares and Grant Group A - Clark
2:30	Coffee Break
3:00 - 5:30	Group C - Schoenthal Group D - Andersen Group A - Mares and Grant Group B - Clark
5:30 - 6:30	Free time. Chance to examine publications on display.
6:30	Dinner
7:45	Assembly Hall Discussion of other aspects of environmental education, of camp management, of the place of such programs in schools. Full faculty.
8:45	Fun time. Dance

Sunday, May 9

6:45	Rising bell.
7:15 a.m.	Breakfast
8:15 - 10:45	Field Sessions Group D - Schoenthal Group A - Andersen Group B - Mares and Grant Group C - Clark
11:00 - 11:45	Non-denominational Church Service -- Pastor John Lee
12:00	Lunch
12:30 - 1:00	Pack up gear and load your cars. Sweep out cabins; clean washrooms.
1:15	Meet at Assembly Hall Final session. Evaluation Awarding of Certificates
2:15	End of camp session

Certificate of Completion

Environmental Education Workshop

Bob Wilson
Meadowlark
Schl.

has successfully completed this workshop offered by

EASTERN MONTANA COLLEGE

and

BILLINGS SCHOOL DISTRICT No. 2

By participation in and completion of this program the individual named showed a concern to have a broader understanding of environmental issues, problems, and teaching methods pertaining to environmental education in order to become a better informed and more responsible citizen and teacher.

DATE

Wilson F. Clark
WILSON F. CLARK
Program Director and Chairman,
Division of Science and Mathematics

Erick K Erickson
ERICK R. ERICKSON
Associate Professor and Camp Director

Edward A. Heiser
EDWARD A. HEISER
Principal, Rose Park School
and Assistant Camp Director

Norm Schoenthal
NORMAN SCHOENTHAL
Professor of Biology

Helen Grilley
HELEN GRILLEY
Professor of Education

Elmer Andersen
ELMER ANDERSON
Associate Professor of Earth Sciences

Timothy R. Mares
TIMOTHY R. MARES
Principal, Taft School and Instructor

APPENDIX B

Session # 1
Page 1

Environmental Education Program, Spring 1971
Billings District #2 and Eastern Montana College

Session # 1, on Monday, May 10, and Tuesday, May 11.

School: Highland,
Principal: Brinkman, Teacher Pike, # children 26 (boys 11, girls 15)
School: Rose Park,
Principal: Heiser, Teacher Frank Dell, # children 22 (boys 11, girls 11)
School: Eastern,
Principal: Erickson, Teacher Reed, # children 30 (boys 19, girls 11)
School: Meadowlark,
Principal: Wilson, Teacher Wilson, # children 22 (boys 10, girls 12)
Totals -------- 100 (boys 51, girls 49)

Director for this session: Erick Erickson. Medical Doctor for this session: Dr. Crellin

Travel to camp.

On Sunday, May 9, children are to have supper at home, and be at their own school by 5:00 p.m., with all their equipment. Teachers and some counsellors will ride the buses with the children. Each item (sleeping bag, suitcase, etc.) is to bear a tag with the child's name, school, and session number.

Buses arrive at Camp about 7:00 p.m. Unload at Assembly Hall.
Cabin assignments. Get settled. Brief campfire program.
Cocoa and snack served.
Lights out at 9:30 p.m.

Monday, May 10

7:00 a.m.	Roll out of bed
7:30	Breakfast and Cabin Duty
8:00 - 8:30	Kamp Kapers (cleanup)
8:30 - 8:45	Orientation, and short inspirational program
8:50 - 11:10	Field Instructional Groups Group A - Geographic studies -- Jim Hicks, Robert Wilson Group B - Geologic studies ---- Dan Fletcher, Prof. Grant, Frank Dell Group C - Ecologic studies ---- Charles Reed, Dr. Schoenthal, Jerry Pike Group D - Plot studies -------- Mike Chapman, Dr. Clark, Dave Kirkness
11:15 - 12:00	Arts and Crafts -- Dr. Helen Northcutt, Vicki Berentson (group A, B) First Aid Instruction -- Dr. Crellin (group C, D)
12:00 noon	Cleanup for lunch
12:15 - 1:30	Lunch, Kamp Kapers, cleanup and a bit of free time.
1:30 - 3:45	Instructional Groups Group B - Geographic studies -- Jim Hicks, Robert Wilson Group C - Geologic studies ---- Dan Fletcher, Prof. Grant, Frank Dell Group D - Ecologic studies ---- Charles Reed, Dr. Schoenthal, Jerry Pike Group A - Plot studies -------- Mike Chapman, Dr. Clark

Session # 1
Page 2

4:00 - 6:00 Free time and Recreation. Write letters. Hike with a counsellor.
Complete Art work (group A & B only) started this morning.
Dr. Northcutt, Vicki Berentson overnite: Lynette Lorang
Phyllis Ridl

Organized and Supervised Recreation.

6:00 Supper, and cleanup
Then free time until campfire

7:30 - 9:15 Campfire program

9:15 Cocoa and snack

9:30 Lights out

Tuesday, May 11

6:30 Morning hike led by one of the staff. Optional. May be a Bird Walk, Flower Walk, or just a nature hike.

7:00 Roll out of bed

7:30 Breakfast

8:00 - 8:30 Kamp Kapers -- cleanup and cabin duty

8:30 - 8:45 Short inspirational program.

8:50 - 11:10 Instructional Groups

Group C - Geographic studies -- Jim Hicks, Bob Wilson
Group D - Geologic studies ---- Dan Fletcher, Frank Dell
Group A - Ecologic studies ---- Jim Strickland, Sue Dunbar, Jerry Pike
Group B - Plot studies -------- Mike Chapman

11:15 - 12:00 Arts and Crafts -- Lynette Lorang, Phyllis Ridl (group C, D)

First Aid Instruction -- Dr. Crellin (group A, B)

12:15 - 1:30 Lunch, cleanup, and free time

1:30 - 3:45 Instructional Groups

Group D - Geographic studies -- Jim Hicks, Bob Wilson
Group A - Geologic studies ---- Dan Fletcher, Frank Dell
Group B - Ecologic studies ---- Jim Strickland, Sue Dunbar, Jerry Pike
Group C - Plot studies -------- Mike Chapman

4:00 - 5:15 Recreation (organized and supervised games) and free time
Art free time for Groups C & D.
Lynette Lorang, Phyllis Ridl (also over nite)

5:15 Cleanup for Dinner

5:30 - 6:00 Dinner and Kamp Kapers

6:00 Pack up

Go to cabins. Pack completely. Tag each piece of luggage with tag bearing child's name, school, and session number.

Take all luggage to porch of Staff Hall (not Assembly Hall).

6:45 Buses arrive with next group of children. Unload at Assembly Hall.

Buses then go to Staff Hall and load those returning to Billings.

7:15 Buses leave.

about 8:45 p.m. Buses arrive at children's own schools.

Session # 2
Page 1

Environmental Education Program, Spring 1971
Billings District #2 and Eastern Montana College

Session # 2 , on Wednesday, May 12, and Thursday , May 13.

School: Boulder ,
Principal: Lundgren , Teacher Dempsey , # children 31 (boys 18 , girls 13)
School: Newman ,
Principal: Richens , Teacher Goldberg , # children 31 (boys 17 , girls 14)
School: Poly ,
Principal: Croff , Teacher Sayler , # children 31 (boys 13 , girls 18)
School: ____________,
Principal: ________, Teacher ________, # children ___ (boys ___, girls ___)
Totals -------- 93 (boys 48, girls 45)

Director for this session: Ed Heiser . Medical Doctor for this session: Dr. J. Anderson

Travel to camp.

On Tuesday , May 11, children are to have supper at home, and be at their own school by 5:00 p.m., with all their equipment. Teachers and some counsellors will ride the buses with the children. Each item (sleeping bag, suitcase, etc.) is to bear a tag with the child's name, school, and session number.

Buses arrive at Camp about 7:00 p.m. Unload at Assembly Hall.
Cabin assignments. Get settled. Brief campfire program.
Cocoa and snack served.
Lights out at 9:30 p.m.

Wednesday , May 12

7:00 a.m.	Roll out of bed
7:30	Breakfast and Cabin Duty
8:00 - 8:30	Kamp Kapers (cleanup)
8:30 - 8:45	Orientation, and short inspirational program
8:50 - 11:10	Field Instructional Groups
	Group A - Geographic studies -- Jim Hicks, Dorothy Dempsey
	Group B - Geologic studies ---- Tim Mares, Roberta Sayler
	Group C - Ecologic studies ---- Clyde Goldberg
	Group D - Plot studies -------- Dave Kirkness
11:15 - 12:00	Arts and Crafts -- Andrea Woltersdorf, Don Hanson (group A, B)
	First Aid Instruction -- Dr. Anderson (group C, D)
12:00 noon	Cleanup for lunch
12:15 - 1:30	Lunch, Kamp Kapers, cleanup and a bit of free time.
1:30 - 3:45	Instructional Groups
	Group B - Geographic studies -- Jim Hicks, Dorothy Dempsey
	Group C - Geologic studies ---- Tim Mares, Roberta Sayler
	Group D - Ecologic studies ---- Clyde Goldberg
	Group A - Plot studies -------- Bob Thompson

4:00 - 6:00	Free time and Recreation. Write letters. Hike with a counsellor. Complete Art work (group A & B only) started this morning. Andrea Woltersdorf, Don Hanson Organized and Supervised Recreation.
6:00	Supper, and cleanup Then free time until campfire
7:30 - 9:15	Campfire program
9:15	Cocoa and snack
9:30	Lights out

Thursday, May 13

6:30	Morning hike led by one of the staff. Optional. May be a Bird Walk, Flower Walk, or just a nature hike.
7:00	Roll out of bed
7:30	Breakfast
8:00 - 8:30	Kamp Kapers -- cleanup and cabin duty
8:30 - 8:45	Short inspirational program.
8:50 - 11:10	Instructional Groups Group C - Geographic studies -- Jim Hicks, Dorothy Dempsey Group D - Geologic studies ---- Rick Klaboe, Roberta Sayler Group A - Ecologic studies ---- Sue Dunbar, Clyde Goldberg Group B - Plot studies -------- Dave Kirkness
11:15 - 12:00	Arts and Crafts -- Andrea Woltersdorf, Don Hanson (group C, D) First Aid Instruction -- Dr. Anderson (group A, B)
12:15 - 1:30	Lunch, cleanup, and free time
1:30 - 3:45	Instructional Groups Group D - Geographic studies -- Jim Hicks, Dorothy Dempsey Group A - Geologic studies ---- Rick Klaboe, Roberta Sayler Group B - Ecologic studies ---- Sue Dunbar, Clyde Goldberg Group C - Plot studies -------- Dave Kirkness
4:00 - 5:15	Recreation (organized and supervised games) and free time Art free time for Groups C & D. Andrea Woltersdorf, Don Hanson (also over nite)
5:15	Cleanup for Dinner
5:30 - 6:00	Dinner and Kamp Kapers
6:00	Pack up Go to cabins. Pack completely. Tag each piece of luggage with tag bearing child's name, school, and session number. Take all luggage to porch of Staff Hall (not Assembly Hall).
6:45	Buses arrive with next group of children. Unload at Assembly Hall. Buses then go to Staff Hall and load those returning to Billings.
7:15	Buses leave.
about 8:45 p.m.	Buses arrive at children's own schools.

Session # 3
Page 1

Environmental Education Program, Spring 1971

Billings District #2 and Eastern Montana College

Session # 3, on Friday, May 14, and Saturday, May 15.

School: Central Heights,
Principal: Langstaff, Teacher Halvor, # children 25 (boys 11, girls 14)
School: Newman,
Principal: Richins, Teacher Dixie Pike, # children 31 (boys 17, girls 14)
School: Highland,
Principal: Brinkman, Teacher Jerry Pike, # children 23 (boys 13, girls 10)
School: Rose Park,
Principal: Heiser, Teacher Zerr, # children 24 (boys 10, girls 14)
Totals -------- 103 (boys 51, girls 52)

Director for this session: Erick Erickson. Medical Doctor for this session: (to be assigne

Travel to camp.

On Thursday, May 13, children are to have supper at home, and be at their own school by 5:00 p.m., with all their equipment. Teachers and some counsellors will ride the buses with the children. Each item (sleeping bag, suitcase, etc.) is to bear a tag with the child's name, school, and session number.

Buses arrive at Camp about 7:00 p.m. Unload at Assembly Hall.
Cabin assignments. Get settled. Brief campfire program.
Cocoa and snack served.
Lights out at 9:30 p.m.

Friday, May 14

7:00 a.m.	Roll out of bed
7:30	Breakfast and Cabin Duty
8:00 - 8:30	Kamp Kapers (cleanup)
8:30 - 8:45	Orientation, and short inspirational program
8:50 - 11:10	Field Instructional Groups Group A - Geographic studies -- Jim Hicks, Dixie Pike Group B - Geologic studies ---- Tim Mares, Janet Halvor Group C - Ecologic studies ---- Mrs. Zerr, Dr. Schoenthal Group D - Plot studies -------- Mike Chapman, Dave Kirkness, Jerry Pike
11:15 - 12:00	Arts and Crafts -- Andrea Woltersdorf, Don Hanson (group A, B) First Aid Instruction -- ________________ (group C, D)
12:00 noon	Cleanup for lunch
12:15 - 1:30	Lunch, Kamp Kapers, cleanup and a bit of free time.
1:30 - 3:45	Instructional Groups Group B - Geographic studies -- Jim Hicks, Dixie Pike Group C - Geologic studies ---- Tim Mares, Janet Halvor Group D - Ecologic studies ---- Mrs. Zerr, Dr. Schoenthal Group A - Plot studies -------- Mike Chapman, Dave Kirkness, Jerry Pike

4:00 - 6:00	Free time and Recreation. Write letters. Hike with a counsellor. Complete Art work (group A & B only) started this morning. Andrea Woltersdorf , Don Hansen with Margaret Fitzgerald over nite Organized and Supervised Recreation.
6:00	Supper, and cleanup Then free time until campfire
7:30 - 9:15	Campfire program
9:15	Cocoa and snack
9:30	Lights out

Saturday , May 15

6:30	Morning hike led by one of the staff. Optional. May be a Bird Walk, Flower Walk, or just a nature hike.
7:00	Roll out of bed
7:30	Breakfast
8:00 - 8:30	Kamp Kapers -- cleanup and cabin duty
8:30 - 8:45	Short inspirational program.
8:50 - 11:10	Instructional Groups Group C - Geographic studies -- Randy Coley, Prof. Andersen, Dixie Pike Group D - Geologic studies ---- Dick Fick, Dan Fletcher, Janet Halvor Group A - Ecologic studies ---- Jim Strickland, Dr. Schoenthal, Mrs. Zerr Group B - Plot studies -------- Dave Kirkness, Mike Chapman, Jerry Pike
11:15 - 12:00	Arts and Crafts -- Margaret Fitzgerald, Judy Fischer (group C, D) First Aid Instruction -- ____________ (group A, B)
12:15 - 1:30	Lunch, cleanup, and free time
1:30 - 3:45	Instructional Groups Group D - Geographic studies -- Randy Coley, Prof. Andersen, Dixie Pike Group A - Geologic studies ---- Dick Fick, Dan Fletcher, Janet Halvor Group B - Ecologic studies ---- Jim Strickland, Dr. Schoenthal, Mrs. Zerr Group C - Plot studies -------- Dave Kirkness, Mike Chapman, Jerry Pike
4:00 - 5:15	Recreation (organized and supervised games) and free time Art free time for Groups C & D. Margaret Fitzgerald , Judy Fischer (overnite)
5:15	Cleanup for Dinner
5:30 - 6:00	Dinner and Kamp Kapers
6:00	Pack up Go to cabins. Pack completely. Tag each piece of luggage with tag bearing child's name, school, and session number. Take all luggage to porch of Staff Hall (not Assembly Hall).
6:45	Buses arrive with next group of children. Unload at Assembly Hall. Buses then go to Staff Hall and load those returning to Billings.
7:15	Buses leave.
about 8:45 p.m.	Buses arrive at children's own schools.

Environmental Education Program, Spring 1971

Billings District #2 and Eastern Montana College

Session # 4, on Sunday, May 16, and Monday, May 17.

School: Grand,
Principal: Wynn, Teacher McDonald, # children 27 (boys 11, girls 16)

School: Boulder,
Principal: Lundgren, Teacher O'Connor, # children 32 (boys 15, girls 17)

School: Rose Park,
Principal: Heiser, Teacher Rimmer, # children 22 (boys 9, girls 13)

School: ________,
Principal: ________, Teacher ________, # children ____ (boys ___, girls ___)

Totals -------- 81 (boys 35, girls 46)

Director for this session: Ed Heiser. Medical Doctor for this session: Dr. Harr

Travel to camp.

On Saturday, May 15, children are to have supper at home, and be at their own school by 5:00 p.m., with all their equipment. Teachers and some counsellors will ride the buses with the children. Each item (sleeping bag, suitcase, etc.) is to bear a tag with the child's name, school, and session number.

Buses arrive at Camp about 7:00 p.m. Unload at Assembly Hall.
Cabin assignments. Get settled. Brief campfire program.
Cocoa and snack served.
Lights out at 9:30 p.m.

Sunday, May 16

7:00 a.m.	Roll out of bed
7:30	Breakfast and Cabin Duty
8:00 - 8:30	Kamp Kapers (cleanup)
8:15 - 8:45	Inter-denominational Sunday Service, conducted by Pastor John Lee.
8:50 - 11:10	Field Instructional Groups
	Group A - Geographic studies -- Randy Coley, Prof. Andersen, Elsie O'Connor Group B - Geologic studies ---- Dick Fick, Dan Fletcher, Aletha McDonald Group C - Ecologic studies ---- J. Strickland, Dr. Schoenthal, D. Rimmer Group D - Plot studies -------- Mike Chapman, Dave Kirkness
11:15 - 12:00	Arts and Crafts -- Kim Bruttomesso, Judy Fischer, Marilyn Stebbins (group A, B)
	First Aid Instruction -- Dr. Harr (group C, D)
12:00 noon	Cleanup for lunch
12:15 - 1:30	Lunch, Kamp Kapers, cleanup and a bit of free time.
1:30 - 3:45	Instructional Groups
	Group B - Geographic studies -- Randy Coley, Prof. Andersen, Elsie O'Connor Group C - Geologic studies ---- Dick Fick, Dan Fletcher, Aletha McDonald Group D - Ecologic studies ---- J. Strickland, Dr. Schoenthal, D. Rimmer Group A - Plot studies -------- Mike Chapman, Dave Kirkness

:00 - 6:00 Free time and Recreation. Write letters. Hike with a counsellor.
Complete Art work (group A & B only) started this morning.
Kim Bruttomesso, Judy Fischer, Marilyn Stebbins (overnite

Organized and Supervised Recreation.

6:00 Supper, and cleanup
Then free time until campfire

7:30 - 9:15 Campfire program

9:15 Cocoa and snack

9:30 Lights out

Monday, May 17

6:30 Morning hike led by one of the staff. Optional. May be a Bird Walk, Flower Walk, or just a nature hike.

7:00 Roll out of bed

7:30 Breakfast

8:00 - 8:30 Kamp Kapers -- cleanup and cabin duty

8:30 - 8:45 Short inspirational program.

8:50 - 11:10 Instructional Groups

Group C - Geographic studies -- Jim Hicks
Group D - Geologic studies ---- Tim Mares, Aletha McDonald
Group A - Ecologic studies ---- Mrs. O'Connor, Dorothy Rimmer
Group B - Plot studies -------- Mike Chapman, Dave Kirkness

11:15 - 12:00 Arts and Crafts -- Betty Johnson, Jack Haker (group C, D)

First Aid Instruction -- Dr. Harr (group A, B)

12:15 - 1:30 Lunch, cleanup, and free time

1:30 - 3:45 Instructional Groups

Group D - Geographic studies -- Jim Hicks
Group A - Geologic studies ---- Tim Mares, Aletha McDonald
Group B - Ecologic studies ---- Mrs. O'Connor, Dorothy Rimmer
Group C - Plot studies -------- Mike Chapman

4:00 - 5:15 Recreation (organized and supervised games) and free time
Art free time for Groups C & D.
Betty Johnson, Jack Haker (both overnite)

5:15 Cleanup for Dinner

5:30 - 6:00 Dinner and Kamp Kapers

6:00 Pack up

Go to cabins. Pack completely. Tag each piece of luggage with tag bearing child's name, school, and session number.

Take all luggage to porch of Staff Hall (not Assembly Hall).

6:45 Buses arrive with next group of children. Unload at Assembly Hall.

Buses then go to Staff Hall and load those returning to Billings.

7:15 Buses leave.

about 8:45 p.m. Buses arrive at children's own schools.

Session # 5
Page 1

Environmental Education Program, Spring 1971
Billings District #2 and Eastern Montana College

Session # 5 , on Tuesday , May 18, and Wednesday , May 19 .

School: Grand ,
Principal: Wynn , Teacher Black , # children 28 (boys 14 , girls 14)
School: Central Heights ,
Principal: Langstaff , Teacher Metzger , # children 25 (boys 13 , girls 12)
School: Highland ,
Principal: Brinkman , Teacher McCabe , # children 23 (boys 12 , girls 11)
School: Central Heights ,
Principal: Langstaff , Teacher Clemens , # children 24 (boys 12 , girls 12)
Totals -------- 100 (boys 51 , girls 49)

Director for this session: Charles Reed . Medical Doctor for this session: (to be assigned)

Travel to camp.

On Monday , May 17 , children are to have supper at home, and be at their own school by 5:00 p.m., with all their equipment. Teachers and some counsellors will ride the buses with the children. Each item (sleeping bag, suitcase, etc.) is to bear a tag with the child's name, school, and session number.

Buses arrive at Camp about 7:00 p.m. Unload at Assembly Hall.
Cabin assignments. Get settled. Brief campfire program.
Cocoa and snack served.
Lights out at 9:30 p.m.

Tuesday , May 18

7:00 a.m.	Roll out of bed
7:30	Breakfast and Cabin Duty
8:00 - 8:30	Kamp Kapers (cleanup)
8:30 - 8:45	Orientation, and short inspirational program
8:50 - 11:10	Field Instructional Groups
	Group A - Geographic studies -- Jim Hicks, Maria Metzger
	Group B - Geologic studies ---- Rick Klaboe, Helen McCabe
	Group C - Ecologic studies ---- Jim Strickland, Leslie Clemens
	Group D - Plot studies -------- Bob Thompson, James Black
11:15 - 12:00	Arts and Crafts -- Betty Johnson, Jack Haker (group A, B)
	First Aid Instruction -- ________________ (group C, D)
12:00 noon	Cleanup for lunch
12:15 - 1:30	Lunch, Kamp Kapers, cleanup and a bit of free time.
1:30 - 3:45	Instructional Groups
	Group B - Geographic studies -- Jim Hicks, Maria Metzger
	Group C - Geologic studies ---- Rick Klaboe, Helen McCabe
	Group D - Ecologic studies ---- Jim Strickland, Leslie Clemens
	Group A - Plot studies -------- Bob Thompson, James Black

4:00 - 6:00 Free time and Recreation. Write letters. Hike with a counsellor. Complete Art work (group A & B only) started this morning.
Betty Johnson , Jack Haker , Laura Brue (overnite)

Organized and Supervised Recreation.

6:00 Supper, and cleanup
Then free time until campfire

7:30 - 9:15 Campfire program

9:15 Cocoa and snack

9:30 Lights out

Wednesday , May 19

6:30 Morning hike led by one of the staff. Optional. May be a Bird Walk, Flower Walk, or just a nature hike.

7:00 Roll out of bed

7:30 Breakfast

8:00 - 8:30 Kamp Kapers -- cleanup and cabin duty

8:30 - 8:45 Short inspirational program.

8:50 - 11:10 Instructional Groups

Group C - Geographic studies -- Jim Hicks, Maria Metzger
Group D - Geologic studies ---- Tim Mares, Helen McCabe
Group A - Ecologic studies ---- Dr. Schoenthal, Leslie Clemens
Group B - Plot studies -------- Dave Kirkness, Bob Thompson, James Black

11:15 - 12:00 Arts and Crafts -- Laura Brue, Serina Becker (group C, D)

First Aid Instruction -- ____________ (group A, B)

12:15 - 1:30 Lunch, cleanup, and free time

1:30 - 3:45 Instructional Groups

Group D - Geographic studies -- Jim Hicks, Maria Metzger
Group A - Geologic studies ---- Tim Mares, Helen McCabe
Group B - Ecologic studies ---- Dr. Schoenthal, Leslie Clemens
Group C - Plot studies -------- Bob Thompson, James Black

4:00 - 5:15 Recreation (organized and supervised games) and free time
Art free time for Groups C & D.
Laura Brue , Serina Becker (overnite)

5:15 Cleanup for Dinner

5:30 - 6:00 Dinner and Kamp Kapers

6:00 Pack up

Go to cabins. Pack completely. Tag each piece of luggage with tag bearing child's name, school, and session number.

Take all luggage to porch of Staff Hall (not Assembly Hall).

6:45 Buses arrive with next group of children. Unload at Assembly Hall.

Buses then go to Staff Hall and load those returning to Billings.

7:15 Buses leave.

about 8:45 p.m. Buses arrive at children's own schools.

Session # 6
Page 1

Environmental Education Program, Spring 1971
Billings District #2 and Eastern Montana College

Session # 6 , on Thursday , May 20, and Friday , May 21.

School: Boulder ,
Principal: Lundgren , Teacher Green , # children 32 (boys 17 , girls 15)
School: Central Heights ,
Principal: Langstaff , Teacher Halvor , # children 25 (boys 13 , girls 12)
School: Grand ,
Principal: Wynn , Teacher Krimmer , # children 26 (boys 13 , girls 13)
School: Rimrock ,
Principal: Lane , Teacher Pederson , # children 25 (boys 13 , girls 12)
Totals -------- 108 (boys 56 , girls 52)

Director for this session: Ed Heiser . Medical Doctor for this session: Dr. Yenko

Travel to camp.

On Wednesday , May 19, children are to have supper at home, and be at their own school by 5:00 p.m., with all their equipment. Teachers and some counsellors will ride the buses with the children. Each item (sleeping bag, suitcase, etc.) is to bear a tag with the child's name, school, and session number.

Buses arrive at Camp about 7:00 p.m. Unload at Assembly Hall.
Cabin assignments. Get settled. Brief campfire program.
Cocoa and snack served.
Lights out at 9:30 p.m.

Thursday , May 20

7:00 a.m.	Roll out of bed
7:30	Breakfast and Cabin Duty
8:00 - 8:30	Kamp Kapers (cleanup)
8:30 - 8:45	Orientation, and short inspirational program
8:50 - 11:10	Field Instructional Groups

Group A - Geographic studies -- Jim Hicks, Louise Pederson
Group B - Geologic studies ---- Roland Grant, Rick Klaboe, Walter Krimmer
Group C - Ecologic studies ---- Sue Dunbar, Archie Green
Group D - Plot studies -------- Bob Thompson, Janet Halvor

11:15 - 12:00	Arts and Crafts -- Karen Grinde, Winnie Van Swearingen (group A, B)
	First Aid Instruction -- Dr. Yenko (group C, D)
12:00 noon	Cleanup for lunch
12:15 - 1:30	Lunch, Kamp Kapers, cleanup and a bit of free time.
1:30 - 3:45	Instructional Groups

Group B - Geographic studies -- Jim Hicks, Louise Pederson
Group C - Geologic studies ---- Roland Grant, Rick Klaboe, Walter Krimmer
Group D - Ecologic studies ---- Sue Dunbar, Archie Green
Group A - Plot studies -------- Bob Thompson, Janet Halvor

4:00 - 6:00	Free time and Recreation. Write letters. Hike with a counsellor. Complete Art work (group A & B only) started this morning. Karen Grinde , Winnie van Swearingen (both overnite) Organized and Supervised Recreation.
6:00	Supper, and cleanup Then free time until campfire
7:30 - 9:15	Campfire program
9:15	Cocoa and snack
9:30	Lights out

Friday , May 21

6:30	Morning hike led by one of the staff. Optional. May be a Bird Walk, Flower Walk, or just a nature hike.
7:00	Roll out of bed
7:30	Breakfast
8:00 - 8:30	Kamp Kapers -- cleanup and cabin duty
8:30 - 8:45	Short inspirational program.
8:50 - 11:10	Instructional Groups Group C - Geographic studies -- Jim Hicks, Louise Pederson Group D - Geologic studies ---- Roland Grant, Walter Krimmer Group A - Ecologic studies ---- Archie Green Group B - Plot studies -------- Bob Thompson, Janet Halvor
11:15 - 12:00	Arts and Crafts -- Karen Grinde, Winnie van Swearingen (group C, D) First Aid Instruction -- Dr. Yenko (group A, B)
12:15 - 1:30	Lunch, cleanup, and free time
1:30 - 3:45	Instructional Groups Group D - Geographic studies -- Jim Hicks, Louise Pederson Group A - Geologic studies ---- Roland Grant, Walter Krimmer Group B - Ecologic studies ---- Archie Green Group C - Plot studies -------- Bob Thompson, Janet Halvor
4:00 - 5:15	Recreation (organized and supervised games) and free time Art free time for Groups C & D. Karen Grinde , Winnie van Swearingen (overnite ?)
5:15	Cleanup for Dinner
5:30 - 6:00	Dinner and Kamp Kapers
6:00	Pack up Go to cabins. Pack completely. Tag each piece of luggage with tag bearing child's name, school, and session number. Take all luggage to porch of Staff Hall (not Assembly Hall).
6:45	Buses arrive with next group of children. Unload at Assembly Hall. Buses then go to Staff Hall and load those returning to Billings.
7:15	Buses leave.
about 8:45 p.m.	Buses arrive at children's own schools.

Session # 7
Page 1

Environmental Education Program, Spring 1971
Billings District #2 and Eastern Montana College

Session # 7 , on Saturday , May 22, and Sunday , May 23 .

School: Bitterroot ,
Principal: Easton , Teacher Iams , # children 30 (boys 14 , girls 16)
School: Poly ,
Principal: Groff , Teacher Jellison , # children 32 (boys 14 , girls 18)
School: Taft ,
Principal: Mares , Teacher Schonkwiler , # children 38 (boys 18 , girls 20)
School: ,
Principal: , Teacher , # children (boys , girls)
Totals -------- 100 (boys 46 , girls 54)

Director for this session: Erick Erickson . Medical Doctor for this session: Dr. Wierzbinski

Travel to camp.

On Friday , May 21, children are to have supper at home, and be at their own school by 5:00 p.m., with all their equipment. Teachers and some counsellors will ride the buses with the children. Each item (sleeping bag, suitcase, etc.) is to bear a tag with the child's name, school, and session number.

Buses arrive at Camp about 7:00 p.m. Unload at Assembly Hall.
Cabin assignments. Get settled. Brief campfire program.
Cocoa and snack served.
Lights out at 9:30 p.m.

Saturday , May 22

7:00 a.m.	Roll out of bed
7:30	Breakfast and Cabin Duty
8:00 - 8:30	Kamp Kapers (cleanup)
8:30 - 8:45	Orientation, and short inspirational program
8:50 - 11:10	Field Instructional Groups

Group A - Geographic studies -- Randy Coley, Prof. Andersen, Dan Jellison
Group B - Geologic studies ---- Dick Fick, Prof. Grant, Violet Schonkwiler
Group C - Ecologic studies ---- Jim Strickland, Dr. Schoenthal
Group D - Plot studies -------- Dave Kirkness, Jeff Iams

11:15 - 12:00	Arts and Crafts -- Anne Gilliam, Glen Close (group A, B)
	First Aid Instruction -- Dr. Wierzbinski (group C, D)
12:00 noon	Cleanup for lunch
12:15 - 1:30	Lunch, Kamp Kapers, cleanup and a bit of free time.
1:30 - 3:45	Instructional Groups

Group B - Geographic studies -- Randy Coley, Prof. Andersen, Dan Jellison
Group C - Geologic studies ---- Dick Fick, Prof. Grant, Violet Schonkwiler
Group D - Ecologic studies ---- Jim Strickland, Dr. Schoenthal
Group A - Plot studies -------- Dave Kirkness, Jeff Iams

Session # 7
Page 2

4:00 - 6:00	Free time and Recreation. Write letters. Hike with a counsellor. Complete Art work (group A & B only) started this morning. Anne Gilliam, Glen Close (both overnite)
	Organized and Supervised Recreation.
6:00	Supper, and cleanup Then free time until campfire
7:30 - 9:15	Campfire program
9:15	Cocoa and snack
9:30	Lights out

Sunday, May 23

6:30	Morning hike led by one of the staff. Optional. May be a Bird Walk, Flower Walk, or just a nature hike.
7:00	Roll out of bed
7:30	Breakfast
8:00 - 8:30	Kamp Kapers -- cleanup and cabin duty
8:15 - 8:45	Inter-denominational Sunday Service, conducted by Father Lester.
8:50 - 11:10	Instructional Groups
	Group C - Geographic studies -- Randy Coley, Prof. Andersen, Dan Jellison Group D - Geologic studies ---- Dick Fick, Prof. Grant, Violet Schonkwiler Group A - Ecologic studies ---- Jim Strickland, Sue Dunbar Group B - Plot studies -------- Dave Kirkness, Jeff Iams
11:15 - 12:00	Arts and Crafts -- Anne Gilliam, Glen Close (group C, D)
	First Aid Instruction -- Dr. Wierzbinski (group A, B)
12:15 - 1:30	Lunch, cleanup, and free time
1:30 - 3:45	Instructional Groups
	Group D - Geographic studies -- Randy Coley, Prof. Andersen, Dan Jellison Group A - Geologic studies ---- Dick Fick, Prof. Grant, Violet Schonkwiler Group B - Ecologic studies ---- Jim Strickland, Sue Dunbar Group C - Plot studies -------- Dave Kirkness, Jeff Iams
4:00 - 5:15	Recreation (organized and supervised games) and free time Art free time for Groups C & D. Anne Gilliam, Glen Close, Vicki Berentson (overnite)
5:15	Cleanup for Dinner
5:30 - 6:00	Dinner and Kamp Kapers
6:00	Pack up
	Go to cabins. Pack completely. Tag each piece of luggage with tag bearing child's name, school, and session number.
	Take all luggage to porch of Staff Hall (not Assembly Hall).
6:45	Buses arrive with next group of children. Unload at Assembly Hall.
	Buses then go to Staff Hall and load those returning to Billings.
7:15	Buses leave.
about 8:45 p.m.	Buses arrive at children's own schools.

Session # 8
Page 1

Environmental Education Program, Spring 1971

Billings District #2 and Eastern Montana College

Session # 8, on Monday, May 24, and Tuesday, May 25.

School: Rimrock,
Principal: Lane, Teacher Craig, # children 25 (boys 14, girls 11)

School: Rimrock,
Principal: Lane, Teacher Abbott, # children 26 (boys 13, girls 13)

School: Grand,
Principal: Wynn, Teacher Holmgren, # children 27 (boys 13, girls 14)

School: Poly,
Principal: Croff, Teacher Tubman, # children 30 (boys 10, girls 20)

Totals -------- 108 (boys 50, girls 58)

Director for this session: Charles Reed. Medical Doctor for this session: Dr. Hartman

Travel to camp.

On Sunday, May 23, children are to have supper at home, and be at their own school by 5:00 p.m., with all their equipment. Teachers and some counsellors will ride the buses with the children. Each item (sleeping bag, suitcase, etc.) is to bear a tag with the child's name, school, and session number.

Buses arrive at Camp about 7:00 p.m. Unload at Assembly Hall.
Cabin assignments. Get settled. Brief campfire program.
Cocoa and snack served.
Lights out at 9:30 p.m.

Monday, May 24

7:00 a.m.	Roll out of bed
7:30	Breakfast and Cabin Duty
8:00 - 8:30	Kamp Kapers (cleanup)
8:30 - 8:45	Orientation, and short inspirational program
8:50 - 11:10	Field Instructional Groups Group A - Geographic studies -- Randy Coley, Jim Hicks, Kathleen Tubman Group B - Geologic studies ---- Dan Fletcher, Patti Abbott Group C - Ecologic studies ---- Sue Dunbar, Laura Holmgren Group D - Plot studies -------- Dave Kirkness, Bob Thompson, Jack Craig
11:15 - 12:00	Arts and Crafts -- Vicki Berentson, Mary Ann Fabian (group A, B) First Aid Instruction -- Dr. Hartman (group C, D)
12:00 noon	Cleanup for lunch
12:15 - 1:30	Lunch, Kamp Kapers, cleanup and a bit of free time.
1:30 - 3:45	Instructional Groups Group B - Geographic studies -- Randy Coley, Jim Hicks, Kathleen Tubman Group C - Geologic studies ---- Dan Fletcher, Patti Abbott Group D - Ecologic studies ---- Sue Dunbar, Laura Holmgren Group A - Plot studies -------- Bob Thompson, Jack Craig

4:00 - 6:00 Free time and Recreation. Write letters. Hike with a counsellor.
Complete Art work (group A & B only) started this morning.
Vicki Berentson, Mary Ann Fabian (overnite)

Organized and Supervised Recreation.

6:00 Supper, and cleanup
Then free time until campfire

7:30 - 9:15 Campfire program

9:15 Cocoa and snack

9:30 Lights out

Tuesday, May 25

6:30 Morning hike led by one of the staff. Optional. May be a Bird Walk, Flower Walk, or just a nature hike.

7:00 Roll out of bed

7:30 Breakfast

8:00 - 8:30 Kamp Kapers -- cleanup and cabin duty

8:30 - 8:45 Short inspirational program.

8:50 - 11:10 Instructional Groups

Group C - Geographic studies -- Randy Coley, Jim Hicks, Kathleen Tubman
Group D - Geologic studies ---- Dan Fletcher, Prof. Grant, Patti Abbott
Group A - Ecologic studies ---- Sue Dunbar, Jim Strickland, Laura Holmgren
Group B - Plot studies -------- Bob Thompson, Jack Craig

11:15 - 12:00 Arts and Crafts -- Mary Ann Fabian, Krys Dahlberg (group C, D)
First Aid Instruction -- Dr. Hartman (group A, B)

12:15 - 1:30 Lunch, cleanup, and free time

1:30 - 3:45 Instructional Groups

Group D - Geographic studies -- Randy Coley, Jim Hicks, Kathleen Tubman
Group A - Geologic studies ---- Dan Fletcher, Prof. Grant, Patti Abbott
Group B - Ecologic studies ---- Sue Dunbar, Jim Strickland, Laura Holmgren
Group C - Plot studies -------- Bob Thompson, Jack Craig

4:00 - 5:15 Recreation (organized and supervised games) and free time
Art free time for Groups C & D.
Mary Ann Fabian, Krys Dahlberg (overnite ?)

5:15 Cleanup for Dinner

5:30 - 6:00 Dinner and Kamp Kapers

6:00 Pack up

Go to cabins. Pack completely. Tag each piece of luggage with tag bearing child's name, school, and session number.

Take all luggage to porch of Staff Hall (not Assembly Hall).

6:45 Buses arrive with next group of children. Unload at Assembly Hall.

Buses then go to Staff Hall and load those returning to Billings.

7:15 Buses leave.

about 8:45 p.m. Buses arrive at children's own schools.

Session # 9
Page 1

Environmental Education Program, Spring 1971
Billings District #2 and Eastern Montana College

Session # 9 , on Wednesday , May 26 , and Thursday , May 27.

School: Highland ,
Principal: Brinkman , Teacher Anderson , # children 26 (boys 15, girls 11)
School: Bitterroot ,
Principal: Easton , Teacher Fradley , # children 30 (boys 13, girls 17)
School: Bitterroot ,
Principal: Easton , Teacher Smith , # children 29 (boys 14, girls 15)
School: Grand ,
Principal: Wynn , Teacher Hug , # children 26 (boys 13, girls 13)
Totals -------- 111 (boys 55, girls 56)

Director for this session: Erick Erickson . Medical Doctor for this session: Dr. Schwidde

Travel to camp.

On Tuesday , May 25, children are to have supper at home, and be at their own school by 5:00 p.m., with all their equipment. Teachers and some counsellors will ride the buses with the children. Each item (sleeping bag, suitcase, etc.) is to bear a tag with the child's name, school, and session number.

Buses arrive at Camp about 7:00 p.m. Unload at Assembly Hall.
Cabin assignments. Get settled. Brief campfire program.
Cocoa and snack served.
Lights out at 9:30 p.m.

Wednesday , May 26

7:00 a.m. Roll out of bed
7:30 Breakfast and Cabin Duty
8:00 - 8:30 Kamp Kapers (cleanup)
8:30 - 8:45 Orientation, and short inspirational program
8:50 - 11:10 Field Instructional Groups
  Group A - Geographic studies -- Jim Hicks, Diane Fradley
  Group B - Geologic studies ---- Dan Fletcher, Tim Mares, Mildred Hug
  Group C - Ecologic studies ---- Sue Dunbar, Elizabeth Smith
  Group D - Plot studies -------- Dave Kirkness, Lorraine Anderson
11:15 - 12:00 Arts and Crafts -- Karen Grinde, Winnie van Swearingen (group A, B)
  First Aid Instruction -- Dr. Schwidde (group C, D)
12:00 noon Cleanup for lunch
12:15 - 1:30 Lunch, Kamp Kapers, cleanup and a bit of free time.
1:30 - 3:45 Instructional Groups
  Group B - Geographic studies -- Jim Hicks, Diane Fradley
  Group C - Geologic studies ---- Dan Fletcher, Tim Mares, Mildred Hug
  Group D - Ecologic studies ---- Sue Dunbar, Elizabeth Smith
  Group A - Plot studies -------- Bob Thompson, Lorraine Anderson

4:00 - 6:00	Free time and Recreation. Write letters. Hike with a counsellor. Complete Art work (group A & B only) started this morning. Karen Grinde, Winnie van Swearingen (both overnite) Organized and Supervised Recreation.
6:00	Supper, and cleanup Then free time until campfire
7:30 - 9:15	Campfire program
9:15	Cocoa and snack
9:30	Lights out

Thursday, May 27

6:30	Morning hike led by one of the staff. Optional. May be a Bird Walk, Flower Walk, or just a nature hike.
7:00	Roll out of bed
7:30	Breakfast
8:00 - 8:30	Kamp Kapers -- cleanup and cabin duty
8:30 - 8:45	Short inspirational program.
8:50 - 11:10	Instructional Groups Group C - Geographic studies -- Jim Hicks, Diane Fradley Group D - Geologic studies ---- Dan Fletcher, Mildred Hug Group A - Ecologic studies ---- Sue Dunbar, Elizabeth Smith Group B - Plot studies -------- Bob Thompson, Lorraine Anderson
11:15 - 12:00	Arts and Crafts -- Karen Grinde, Winnie van Swearingen (group C, D) First Aid Instruction -- Dr. Schwidde (group A, B)
12:15 - 1:30	Lunch, cleanup, and free time
1:30 - 3:45	Instructional Groups Group D - Geographic studies -- Jim Hicks, Diane Fradley Group A - Geologic studies ---- Dan Fletcher, Mildred Hug Group B - Ecologic studies ---- Sue Dunbar, Elizabeth Smith Group C - Plot studies -------- Bob Thompson, Lorraine Anderson
4:00 - 5:15	Recreation (organized and supervised games) and free time Art free time for Groups C & D. Karen Grinde, Winnie van Swearingen
5:15	Cleanup for Dinner
5:30 - 6:00	Dinner and Kamp Kapers
6:00	Pack up Go to cabins. Pack completely. Tag each piece of luggage with tag bearing child's name, school, and session number. Take all luggage to porch of Staff Hall (not Assembly Hall).
6:45	Buses arrive with next group of children. Unload at Assembly Hall. Buses then go to Staff Hall and load those returning to Billings.
7:15	Buses leave.
about 8:45 p.m.	Buses arrive at children's own schools.

APPENDIX C

Attendance Record by Schools and Years

School	Spring 1967	Spring 1968	Spring 1969	Spring 1970	Spring 1971	Totals
Ashland			11			11
Bitterroot			49	63	89	201
Boulder				102	95	197
Central Hts.					99	99
Eastern Elem.	30	28	25	27	30	140
Grand				30	134	164
Highland				120	98	218
Meadowlark					22	22
Newman				48	62	110
Poly Drive					93	93
Rimrock			57	66	74	197
Rose Park					68	68
Taft		24	48	29	38	139
Totals	30	52	190	485	902	1,659

APPENDIX D

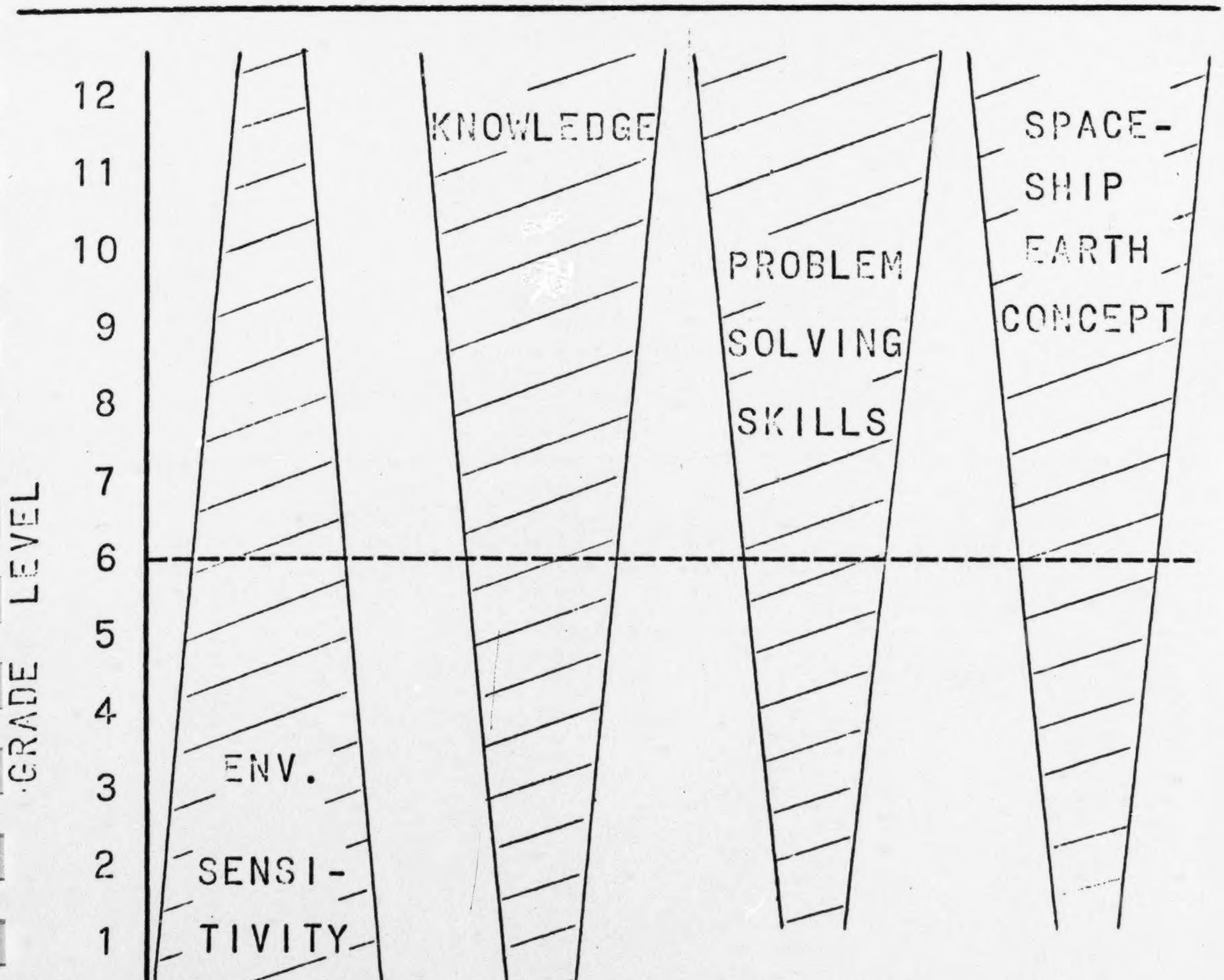
Financial Aspects of the Environmental Education Program

Item	Spring 1967	Spring 1968	Spring 1969	Spring 1970	Spring 1971
Transportation	special contract arrangements with E.U.B. Camp on the Boulder River	$ 70.00	$ 426.80	$ 1,437.00	$ 2,191.80
Food		519.16	1,225.00	2,530.23	3,345.81
Kitchen Services		120.00	700.00	1,434.00	2,245.00
Insurance		43.55	90.00	239.50	544.00
Supplies and Camp Rental		64.00	80.00	289.50	1,000.00
Other Expenses				502.05	661.17
Total Costs	------	$ 816.71	$ 2,521.80	$ 6,432.28	$ 9,987.78
Total # children	30	52	190	485	902
Approx. Cost/Child		$ 27.22	$ 13.27	$ 13.26	$ 11.07*

*** $ 11.07/child was cost based on total children planned for. Because of "no-shows", the cost per child actually in camp was $ 12.37.**

APPENDIX E

BROAD CURRICULUM CONTENT
# of a K-12
ENVIRONMENTAL EDUCATION PROGRAM


GRADE LEVEL
12
11
10
9
8
7
6
5
4
3
2
1
(K)
ENV. SENSI-TIVITY
KNOWLEDGE
PROBLEM SOLVING SKILLS
SPACE-SHIP EARTH CONCEPT

APPENDIX F

Counselor Duties

Fires

We will need a fire tender(s) for the following:

- kitchen, hot water
- cook's house
- boy's and girl's lavatories
- infirmary
- recreation hall
- campfire

Equipment needed:

- saws and axes (who to bring)

____

______________________________ (names)

Driver

To and from Red Lodge for:

- mail
- groceries
- laundry (dish towels)

____

Recreation

We will need organized P.E. from 4:00-5:00 p.m. for boys and girls each day:

- baseball
- volleyball
- kick-the-can

____

____

Counselors

We will need counselors for the boy's and girl's cabins. Cabins will be numbered, and boys and girls separated.

Girls	Boys
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________

Utility man

One person will be needed to pinch hit as coordinator. This should be a man.

____

APPENDIX G

KAMPUS KAPERS

	Table Setting	Dishes	Lavatory	Lodge & Campfire	Garbage & Grounds
Tuesday	Morning Cabin-1	Morning Cabin-5	Boys Cabin-9	Cabin-4	Cabin-10
	Noon Cabin-8	Noon Cabin-7	Girls Cabin-3		
	Night Cabin-2	Night Cabin 4			
Wednesday	Morning Cabin-9	Morning Cabin-2	Boys Cabin-7	Cabin-2	Cabin-5
	Noon Cabin-3	Noon Cabin-8	Girls Cabin-4		
	Night Cabin-10	Night Cabin-1			
Thursday	Morning Cabin-4	Morning Cabin-5	Boys Cabin-8	Cabin-9	Cabin-10
			Girls Cabin-1	Cabin-7	Cabin-3

APPENDIX H

MEMORANDUM

March 21, 1969

TO: Sixth Grade Teachers (Environmental Education)

FROM: Ed Heiser

RE: Cabin Assignments

The time is approaching when we should be thinking about cabin assignments for the "outing". If you will submit the information below to me, we will set up a sociogram here at Eastern, giving some of the college students a practical exercise.

Please have the students number from 1 to 7 on a 3 x 5" card. The numbers should be completed with the following information:

1. Name
2. School
3. Teacher
4. Name the person you would most like to share your cabin with you (excluding opposite sex).
5. If you could not share your cabin with the above person, who would be your second choice?
6. Name a person with whom you would not mind sharing your cabin.
7. Name the person you would not want in your cabin.

Thank you.

APPENDIX I

EASTERN ELEMENTARY

RIMROCK ELEMENTARY

BITTERROOT ELEMENTARY

ASHLAND ELEMENTARY

TAFT ELEMENTARY

Third Annual

OUTDOOR EDUCATION EXPERIENCE

May 18 - 23

April 25, 1969

Dear Parents:

The faculties of the Eastern, Rimrock, Taft, and Bitterroot Elementary Schools, in cooperation with College personnel of the Division of Physical Science, under the direction of Dr. Wilson Clark, Chairman, will conduct the Third Annual Environmental Education Unit for our sixth grade boys and girls.

We have permission to use the Lion's Camp at Red Lodge, Montana, for our Environmental Education Program. The camp facilities are quite adequate for our needs. Facilities include electricity, running water, lavatories and sleeping quarters.

Per pupil costs of this experience will be assumed by the schools. Pupils are obligated to exemplary conduct, sleeping bags and two complete changes of warm clothing.

A general course outline is included in this booklet. This outline gives an overview of times, schedules, instructions, periods, and general suggestions.

We wish to have your child participate in the Environmental Education Conservation Program. Please sign the slip below, detach same, and return to his or her sixth grade teacher.

It is necessary that we have your permission for your child's participation in this Environmental Education Program. Teachers, college personnel and camp counselors will supervise the children at all times. Medical doctors will accompany the entourage.

Very truly yours,

Erick K. Erickson, Director
Campus School
Eastern Montana College

(detach and return)

I give permission to have my son/daughter, ______________________________

attend the Environmental Education Conservation Program, which is to be

held May 18 through 23, 1969.

____
Signature of Parent or Legal Guardian

TIME SCHEDULE

FIRST SESSION

Involving:

Teachers	School	Number of Children
Mr. Heiser	Eastern	25
Mrs. Thomas	Bitterroot	26
Mrs. Richau	Taft	20
Mr. Jones	Rimrock	28
		99 total

Sunday, May 18

2 buses needed. One will pick up the children at Bitterroot and Taft. The other will pick up the children at Eastern and Rimrock.

2 trucks needed, to carry the duffel.

Children to have supper at home, and be at their respective schools by 6:30 p.m.

Arrive at camp probably no later than 8:30 p.m. Cocoa and snack served. Get settled in cabins. Lights out by 10:00 p.m.

Monday, May 19

5:30	Those that want to, may attend a "Birdwalk" led by Dr. Schoenthal		
7:00	All roll out of bed		
7:30	Breakfast and cabin duties		
8:00-8:30	Kamp Kapers (camp routine, dishes, cleanup, etc.)		
8:30-9:00	Orientation and assembly. Perhaps short inspirational program		
9:00 - 11:00	Instructional Groups:		
	Andersen	Group 1	Geography
	Mares	Group 2	Rocks and Minerals
	Schoenthal	Group 3	Aquatic Ecology
	Clark	Group 4	Plot study
11:15-12:00	Special interest of Groups (art, crafts, first aid, math, out of doors)		
12:15-1:15	Lunch and free time		
1:15-1:45	Kamp Kapers (camp routine)		
1:45-3:45	Instructional Groups:		
		Group 2	Geography
		Group 3	Rocks and Minerals
		Group 4	Aquatic Ecology
		Group 1	Plot study
4:00-5:00	Recreation (organized games)		
5:00-6:00	Free time (letters to parents, etc.)		
6:00-	Dinner, followed by cleanup and free time		
7:30-9:15	Campfire program		
9:30	Lights out		

Tuesday, May 20

7:00 Roll out of bed (no birdwalk)
Same basic program as Monday, except that Instructional Groups in the morning will be:

Group 3	Geography
Group 4	Rocks and Minerals
Group 1	Aquatic Biology
Group 2	Plot study

and instructional groups in the afternoon will be:

Group 4	Geography
Group 1	Rocks and Minerals
Group 2	Aquatic Biology
Group 3	Plot study

Wednesday, May 21

7:30	Roll out of bed
8:00	Breakfast
8:30-9:00	Kamp Kapers (clean-up, dishes)
9:00-10:00	Pack up, pick up, clean cabins, all gear brought down to Assembly Hall.

10:00 until buses and trucks arrive: organized games

SECOND SESSION

Involving:

Teachers	School	Number of children
Mrs. Mossman	Taft	23
Mrs. Pederson	Rimrock	28
Mr. Schauer	Bitterroot	29
	Ashland	12
		92 total

Wednesday, May 21

2 buses needed. One will pick up children at Bitterroot, then go to Rimrock. The other will pick up children at Taft then go to Rimrock.

The children from Rimrock will be divided between the two buses.

2 trucks needed. These trucks would have deadheaded back from Red Lodge on Monday or Tuesday.

Children to be ready with all gear at their school by 9:00 a.m.

Arrive at camp probably by 11:30.

Unload, assign to cabins, get ready for lunch.

As soon as buses and trucks unload, the children of the First Session load up and head for Billings, (May want to consider having a sack lunch for them to eat on the way).

12:15-1:15	Lunch and cleanup		
1:15-1:45	Orientation and assembly		
1:45-3:45	Instructional Groups		
		Group 1	Geography
		Group 2	Rocks and Minerals
		Group 3	Aquatic Biology
		Group 4	Plot Study
4:00-5:00	Recreation (organized games)		
5:00-6:00	Free time. Finish getting settled in the cabins		
6:00	Dinner, followed by cleanup and free time		
7:30-9:00	Campfire program		
9:30-11:00	Lights out		

Thursday, May 22

5:30	Early birdwalk for those who want to go. Dr. Schoenthal		
7:00	All roll out of bed		
7:30	Breakfast		
8:00-8:30	Kamp Kapers (camp routine, dishes, cabin clean-up)		
8:30-9:00	Assembly program		
9:00-11:00	Instructional Groups		
		Group 2	Geography
		Group 3	Rocks and Minerals
		Group 4	Aquatic Biology
		Group 1	Plot Study
11:15-12:00	Special interest groups (art, crafts, first aid, math out of doors)		
12:15-1:15	Lunch and free time		
1:15-1:45	Kamp Kapers (camp routine)		
1:45-3:45	Instructional Groups		
		Group 3	Geography
		Group 4	Rocks and Minerals
		Group 1	Aquatic Biology
		Group 2	Plot Study
4:00-5:00	Recreation (organized games)		
5:00-6:00	Free time (letters to parents, etc.)		
6:00	Dinner, followed by cleanup and free time		
7:30-9:15	Campfire program		
9:30	Lights out		

Friday, May 23

7:00	No birdwalk, roll out of bed, pack up all personal gear, and bring it to assembly hall, ready to load
7:30	Breakfast and cabin duties

8:00 - 8:30	Kamp Kapers	
8:30 - 9:00	Assembly	
9:00 -11:00	Instructional groups	
	Group 4	Geography
	Group 1	Rocks and Minerals
	Group 2	Aquatic Biology
	Group 3	Plot Study
11:15 -12:00	Special Interest Groups (Art, Crafts, First-aid, Math out-of-doors)	
12:15	Lunch, followed by Kamp Kapers	
1:15	Buses load, Trucks load, Return to Billings.	

EQUIPMENT LIST FOR EACH CHILD

Sleeping bag (many children borrow sleeping bags for this trip)
Warm clothing: winter jacket, hat or cap, extra slacks
BOOTS OR OVERSHOES
Pajamas
Toothpaste - tooth brush and cup
Heavy shoes
Sneakers
Two complete changes of clothing
Two pencils - notebook to keep papers passed out during camp in or large manila envelope.

NOTE: Only one suitcase or any other receptacle for transporting the above items will be allowed.

NOTE: Any special medication should have written instructions and be given to Mr. Erickson. He, in turn, will hand it over to the camp physicians.

CAMP PHYSICIANS: Dr. Paul Crellin, of the Children's Clinic, Billings, Montana, and Dr. Donald L. Harr, Billings, Montana.

CABIN ASSIGNMENT: Boys and girls will be assigned cabins. Each cabin will accomodate eight children. Camp counselors will oversee the cabin duties and lights-out regulation.

DINING HALL DUTIES: Children are expected to help with dining hall duties. They will be assigned specific duties on a rotational basis.

PARENTS DAY: Parents are welcome to attend the Environmental Education Experience at any time. We have set aside Tuesday, May 20, and Thursday, May 22, as Parents' Day. Plan to visit the campsite, attend classes, stay for luncheon and dinner, and overnight if your busy schedule permits. Cabins will be provided for parents who choose to stay overnight. (Parents provide own sleeping bag.)

VISITING CHILDREN: Children are welcome to visit the campsite accompanied by parents.

Please notify Mr. Erickson if you intend to visit so that he may plan for meals and overnight accommodations.

Mr. Erick Erickson
Eastern Montana College
657-2210

CLASS SCHEDULES: Each instructional period will be taught by College and Public School faculty. Group assignments are pre-determined and will be given to the pupils at the campsite.

INSTRUCTIONAL STAFF:

Dr. Wilson Clark, Chairman, Division of Science and Mathematics
Dr. Norman Schoenthal, Associate Professor, Biology
Dr. Helen Grilley, Professor, Education
Mr. Elmer Andersen, Professor, Earth Science
Mr. Ed Heiser, Sixth Grade Teacher, EMC
Mrs. Sandra Mossman, Sixth Grade Teacher, Taft School
Mr. Tim Mares, Principal, Taft School
Mr. Erick Erickson, Principal, Eastern Elementary School
Mr. Art Schauer, Sixth Grade Teacher, Rimrock School
Mrs. Louise Pederson, Sixth Grade Teacher, Rimrock School
Mrs. Jan Richau, Sixth Grade Teacher, Taft School
Mrs. Thomas, Sixth Grade Teacher, Bitterroot School
Mr. Ed Jones, Sixth Grade Teacher, Rimrock School

INSURANCE: A blanket policy of insurance will be provided for all participants.

ENDORSEMENT AND SPONSORSHIP: The Environmental Education Experience enjoys the endorsement of School District #2 and Eastern Montana College.

APPENDIX J

ANNOTATED BIBLIOGRAPHY FOR TEACHERS

Books

American Association for Health, Physical Education and Recreation. Education In and For the Outdoors. Washington, D. C., American Association for Health, Physical Education and Recreation, 1963.
This is a report of the National Conference on Outdoor Education which was held in Michigan in 1962.

American Association of School Administrators. Conservation - In the People's Hands. Washington, D. C., American Association of School Administrators, 1964.
A general survey is given of conservation with emphasis upon wise use. Attention is given to the contributions of the schools in conservation education.

Ashbaugh, Byron L., and Muriel Beuschlein. Things To Do in Science and Conservation. Danville, Interstate, 1960.
Contains concepts of both natural and "man-developed" resources, suggests materials and techniques to demonstrate concepts and characteristics, presents questions for the student. Conservation interrelationships are included. Bibliographies at ends of chapters; information sources and teaching aids at end of text. Sponsored by Conservation Education Association in cooperation with American Nature Association.

Bale, Robert O. Conservation for Camp and Classroom. New York, Feffer and Simmons, Inc. 1962.
This text discusses each facet of conservation. It discusses conservation of water, soils, forests, wildlife and other resources through a series of individual and group activities.

Blough, Glenn O., and Julius Schwartz. Elementary School Science and How To Teach It. 3rd ed. New York, Holt, Rinehart and Winston, 1964.
Conservation of resources is covered in "Living Things". Natural resources included are minerals and air in "The Earth and the Universe", plants and animals in "Living Things"; a final part reviews "Energy and Matter". Background information and teaching suggestions are presented in separate chapters. Introductory part reviews objectives of teaching science, instruction methods, organization of a curriculum, criteria for selecting materials, evaluation and testing techniques.

Boyer, Robert E., and Jon L. Higgins. Activities and Demonstrations for Earth Science. West Nyack, Parker, 1970.
Contains practical experiments with numerous follow-up activities and ideas arranged under four major topics: geology, oceanography, meteorology, astronomy. Presents motivators and concise background information, materials and student procedure, analysis of results and further investigation.

Brennan, Matthew J., ed. People and Their Environment. Chicago, Ferguson, 1969.

Tested conceptual approach of the South Carolina Improvement Project contains lessons for grades 1 through 12. Series has been intended as an example of conservation and environmental materials that could be integrated with existing curricula.

Brennan, Matthew J. Teacher's Curriculum Guide to Conservation Education. Chicago, J. G. Ferguson Publishing Company, 1969.

A curriculum guide put out by the South Carolina Conservation Curriculum Improvement Project. These books are available for grades 1-8. The series is highly recommended by Dr. Wilson Clark, Eastern Montana College, Billings, Montana.

Brown, Robert E., and G. W. Mouser. Techniques for Teaching Conservation Education. New York. Feffer and Simmons, Inc., 1964.

This book utililizes a workable nontechnical approach to field activity in the area of conservation.

Cooper, Elizabeth K. Science in Your Own Back Yard. New York, Harcourt, Brace and World, 1958.

Simple directions for numerous experiments include soil and rocks, fossils, water, grass and flowers, plants, animal life, weather and the atmosphere. Suggestions are given concerning location, tools and equipment for a back-yard laboratory.

Dambach, Charles A., and Robert R. Finley (ed.). A Guide to Teaching Conservation in Ohio Elementary Schools. Ohio, Ohio Forestry Association, Inc., 1961.

Dimock, H. S., and E. C. Hendry. Camping and Character. New York, Associated Press, 1931.

A report is given of principles and procedures of education practiced in achieving character outcomes in the lives of summer campers.

Donaldson, George W. School Camping. New York, Associated Press, 1952.

A report is given on the values gained by school camping in the curriculum.

Eby, Frederick. The Development of Modern Education. New York, Prentice Hall, Inc., 1952.

A general survey of education is given.

Emanuelson, Clifford E., and Virginia Emanuelson. Conservation Quikies. Danville, Illinois, The Interstate Printers and Publishers, Inc., 1966.

Fersh, George L. Natural Resource Use in Our Economy. New York, Conservation and Resource - U. S. Education Project Joint Council on Economic Education, 1960.

Freeberg, William H., and Loren E. Taylor. Philosophy of Outdoor Education. Minneapolis, Burgess Publishing Company, 1963.

The authors have given the history, method, and philosphy of outdoor education. Modern concepts practiced by four programs of outdoor education are described.

Freeberg, William H., and Loren E. Taylor. Programs in Outdoor Education. Minneapolis. Burgess Publishing Company, 1963.
The principles of outdoor education are given, followed by ways and means of enriching subject matter areas, and concluding with evaluation of outdoor education programs.

Gabrielson, Alexander M., and Charles Holtzer. The Role of Outdoor Education. New York, The Center of Applied Research in Education, 1965.

Garrison, Cecil. Outdoor Education: Principles and Practice. Springfield, Thomas, 1966.
Text for college course in outdoor education, recreation or camping describes a variety of outdoor activities with a minimum of technical terminology. Includes weather lore and forecasting; nature study; edible wilk meats, fruits and plants; rocks. Special attention is devoted to the handicapped and to hazards of the outdoors.

Good, Carter V. (ed.). Dictionary of Education. 2d ed. revised. New York, McGraw-Hill Book Company, Inc., 1959.
Definitions of terms are given.

Hamm, Russell L., and Larry Nason. An Ecological Approach to Conservation. New York, Feffer and Simmons, Inc., 1964.
Problems discussed include over-population, mineral and forest conservation, and the role of nuclear science in the field of conservation.

Hammerman, Donald E., and William M. Hammerman. Teaching in the Outdoors. Minneapolis, Burgess Publishing Company, 1964.
Effective techniques and procedures for outdoor education are given.

C. Richard Hatch Associates. Urban Action: Planning for Change. Boston, Ginn, 1970.
Innovative approach to the study of urban problems shows young people how community change takes place and how they can become actively involved in the process of change. The urban environment is explored from historical, political and sociological perspectives. The student can apply this knowledge towards improving his own neighborhood.

Hawkinson, John. Our Wonderful Wayside. Chicago, Whitman, 1966.
Illustrated book contains detailed instructions for activities during each season. Intention is to encourage young children to appreciate the beauty of nature by learning what to do with small wildlife and other "wayside riches". Appropriate use of materials is stressed, though little is needed in the way of equipment or special knowledge.

Henderson, Ernest L. The World Around Them. Whitesbog, Conservation and Environmental Science Center, 1969.
Environmental education in the urban setting. Includes units on a city block, the streets of the city, noise pollution. Contains student worksheets and study guides.

High Rock Park Conservation Center. Man and His Environment. Staten Island, 1969.
Program designed to develop environmental awareness contains help for teachers before, during and after a visit to a nature center.

Hillcourt, William. Field Book of Nature Activities and Conservation. rev. ed. New York, Putnam, 1961.

Introductory chapters include suggestions for field trips and recording findings, photography and nature collections, leadership, trails, museums and workshops. Project directions are given for specific natural resources; individual and group activities are outlined for general conservation and for conservation of outdoor areas.

Hone, Elizabeth B., Alexander Joseph and Edward Victor. Teaching Elementary Science: A Sourcebook for Elementary Science. New York, Harcourt, Brace and World, 1962.

Techniques for demonstrations, activities and experiments are described with directions and illustrations; some are intended for the teacher alone while others may be used by groups of children or by individuals. Natural resources are represented by animals, plants, air, water.

Hug, John W., and Phyllis J. Wilson. Curriculum Enrichment Outdoors. New York, Harper and Row, 1965.

Introductory chapters present some values of outdoor education and general advice on planning for a group or class. Specific activity suggestions are listed and explained briefly for some seven subject areas. Those for science include trees, shrubs and vines; seeds and plants; birds; insects; various animals; soils and rocks; weather. Suggestions for social studies include land and land use; noting the influence of environment on people's way of life; studying water sources; comparing insect activities with human occupations; comparing man's inventions with nature's devices. Activities are grouped at end of text by suitability for three grade levels.

Irwin, Frank L. The Theory of Camping. New York, A. S. Barnes and Company, 1950.

The educational point of view is presented and special attention is given to methods of accomplishing the aims of education.

Levy, Alan G. Our Man-made Environment, Book 7. Philadelphia, Group for Environmental Education, 1969.

What is the man-made environment? Why do we build our environment? What determines the form of our environment? Workbook designed by architects and urban planners of Philadelphia helps young people to answer these questions through the construction (by means of "push outs") of actual spatial models.

Macintosh, Helen. Camping and Outdoor Experiences in the School Program. Bulletin 1947, No. 4. Washington, D. C., United States Office of Education, 1947.

The bulletin has many illustrations of programs that have been developed by individual schools.

Macmillan, Dorothy Lou. School Camping and Outdoor Education. Dubuque, Iowa, Wm. C. Brown Company, 1956.

The book contains material which is of interest to the camp director and staff.

Manly, Helen, and M. F. Drury. Education Through School Camping. St. Louis, The C. V. Mosby Company, 1952.

The first part of the book discusses problems in camping and the last part discusses the curriculum and its importance.

Milliken, Margaret, Austin F. Hamer and Ernest C. McDonald. Field Study Manual for Outdoor Learning. Minneapolis, Burgess Publishing Company, 1968.

Mitchell, A. Viola, and Ida B. Crawford. Camp Counseling. Philadelphia, W. B. Saunders Company, 1950.
The camp curriculum and its activities are discussed from the point of view of the counselor.

Morholt, Evelyn, Paul F. Brandwein and Alexander Joseph. A Sourcebook for the Biological Sciences. 2nd ed. New York, Harcourt, Brace and World, 1966.
Comprehensive presentation of techniques and procedures which can be used in the classroom, laboratory, or field with animals and plants as bases for study. Interrelationship among living things and suggestions for field work are described in chapter, "Web of Life: Ecological Patterns".

Munzer, Martha E., and Paul F. Brandwein. Teaching Science Through Conservation. New York, McGraw-Hill, 1960.
Contains selected practical laboratory and field study procedures which are intended to deal with conservation "as an integral part of science teaching". First of two tables of contents presents ecological orientation by arranging chapters according to interrelationships - between living things and their environment, between matter and energy.

National Association of Biology Teachers. The Conservation Handbook. Danville, Illinois, Interstate Printers, 1958.

National Audubon Society. A Place to Live; A New Study Program in Urban Ecology. New York, 1970.
A self-motivating work-text which covers basic ecological concepts found in any urban environment. Book is divided into the following sections: You, Where You Live, Other Living Things, Needs, Cities Change the Environment. Also included are "Try This" activities (for individual and group) and nine "Walks" (not requiring transportation).

Nickelsburg, Janet. Field Trips; Ecology for Youth Leaders. Minneapolis, Burgess, 1966.
Contains discussion of the biome - its areas and climates, with soil as an environmental factor. Environments and communities described include stream banks, ponds and marshes, forests, the ocean beach, the desert, grasslands. Additional chapters cover trees, mammals and birds of the seashore, also tollerance and successions. Advice is given for the first field trip, and suggestions are made for the amateur ecologist.

Pringle, Laurence P., ed. Discovering the Outdoors: A Nature and Science Guide to Investigating Life in Fields, Forests, and Ponds. Garden City, Natural History Press, 1969.
Illustrated book offers introduction to wild animals and plants by presenting them in three kinds of habitats: Fields, forests, ponds. Contains suggestions for exploring them and gives simple instructions for "investigations" that a young person can follow.

Project S.P.R.U.C.E. (Science Project Related to Upgrading Conservation Education). Bethesda, ERIC, 1969.
A New Approach to School Camping, Grades K-6.
Seven Steps for Developing an Outdoor School Area for Teaching Science Conservation.

Urban Discovery Manual, Grades K-6.
Three-year project on environmental education - utilizing the outdoors in schools, camps and urban areas - has now been completed by Phyllis S. Busch.

Roth, Charles E. Curriculum Overview for Developing Environmentally Liberate Citizens. Lincoln, Massachusetts Audubon Society, 1969.
Discusses the ways men interact with environment on a daily basis. Spells out behavioral characteristics of "environmentally liberate citizens" as the output of environmental education. Spells out 179 input concepts in natural sciences, social sciences, humanities and language arts that are basic processes needed to bring it all about.

Schramm, Wilbur. Classroom Out-of-Doors. Kalamazoo, Michigan, Sequoia Press Publishers, 1969.

Science Curriculum Improvement Study. Environmental Influences. Berkeley, California, University of California, 1968.

Science Curriculum Improvement Study. Life Cycles. Berkeley, California, University of California, 1968.

Science Curriculum Improvement Study. Organisms. Berkeley, California, University of California, 1968.

Science Curriculum Improvement Study. Population Communities. Berkeley, California, University of California, 1968.

Sharp, Lloyd B. Extending Education Through Camping. New York, Life Camps, Inc., 1948.
The author describes an experimental study of one of the early camps sponsored by the Board of Education of the City of New York.

Sheckles, Mary. Building Children's Science Concepts, Experiences with Rocks, Soil, Air, and Water. New York. Teachers College, Columbia University, 1958.

Shomon, Joseph J. Manual of Outdoor Interpretation. New York, National Audubon Society, Inc., 1968.

Smith, Julian W., and others. Outdoor Education. Englewood Cliffs, Prentice-Hall, 1963.
The history of outdoor education in the development of the American educational system and its application "to many areas in the school curriculum" is presented. Suggestions are given concerning use of land and facilities, the organization of personnel and the training of teachers. Possible activities are explained; specific successful programs are described in detail.

Smith, Julian. Outdoor Education for American Youth. Washington, D. C., American Association for Health, Physical Education and Recreation, 1959.

Stapp, William B. Integrating Conservation and Outdoor Education into the Curriculum. New York, Feffer and Simmons, Inc., 1964.

Stead, William H. Natural Resource Use in Our Economy. New York, Joint Council on Economic Education, 1960.

Emphasis is on wise management of renewable and nonrenewable resources to maintain high standards of living in the United States. Contains concise review about resource outlook, specific natural resources, potential technological developments, some economic problems, clarification of responsibilities.

Van der Smissen, Betty, and Oswald H. Goering. A Leader's Guide to Nature-oriented Activities. Ames, Iowa State University Press, 1965.

Suggestions for program development cover basic organization, interpretive program and community resources. Projects and hobbies include conservation, animals, birds, plants, insects, rocks and minerals, weather.

Watt, Kenneth E. F. Ecology and Resource Management: A Quantitative Approach. New York, McGraw-Hill, 1968.

Text for college course is intended to encompass several disciplines and to present a broad perspective of natural resources. Contains detailed presentation of the application of statistics and computer techniques to solve complex problems in ecology and resource management.

Weaver, Richard L. Handbook for Teaching of Conservation and Resource-use. Danville, Interstate, 1958.

Introduction includes list of basic concepts around which an effective conservation program may be developed, also list of criteria recommended as guides in locating outstanding examples of teaching and techniques and in evaluating a school program.

Weaver, Richard L. Manual for Outdoor Laboratories. Danville, Interstate, 1959.

Compilation of articles intended to promote the development and use of school grounds as outdoor laboratories. Contains descriptions of ways to establish them, features to emphasize and uses to make of the areas.

Wensberg, Katherine. Experiences with Living Things: An Introduction to Ecology. Boston, Beacon Press, 1966.

Contains background information and suggested experiences for various natural resources. Lives and habits of small animals and insects are presented. Interrelationships in nature are stressed throughout the book.

__________. Outdoor Education for American Youth. Washington, D. C., American Association for Health, Physical Education, and Recreation, 1957.

This is a publication of a number of reports by leaders in the field of outdoor education. Special emphasis is given to the high school curriculum.

__________. Outdoor Living. New York, Feffer and Simmons, Inc., 1961.

This book will be of special interest to conservationists often called on to deal with the public, such as Park and Forest Rangers and Camp Administrators.

__________. Programs in Outdoor Education. Minneapolis, Burgess Publishing Company, 1963.
The principles of outdoor education are given, followed by ways and means of enriching subject matter areas, and concluding with evaluation of outdoor education programs.

Articles and Periodicals

Adams, Jean Larson, and Howard H. Michaud. A Selected List of Filmstrips on the Conservation of Natural Resources. Danville, Illinois, Interstate Printers and Publishers, Inc., 1968.
A list of current filmstrips on conservation published by the Conservation Education Association.

Alexander, S. B. "Citizenship Training", Camping Magazine, XXXII, (May, 1960), p. 38.
According to the American Camping Association, the seventh objective of camping is to give citizenship training which is in keeping with the principles and traditions of American Democracy. Spiritual and patriotic activities in camp are practiced to attain the seventh objective.

Ashcraft, J. H. "The Attitude of Children Toward Outdoor Education", California Journal of Elementary Education, XXVI, (November, 1951), pp. 95-101.
Long Beach sixth graders responded to a questionnaire in regard to their five-day outdoor education program. The 1,500 answers revealed that outdoor education has an almost universal appeal and that it satisfies many of the fundamental urges and needs of youth.

Beker, J. "Extending Science Education Through Elementary School Camping", Science Education, XLIV, (March, 1960), pp. 138-142.
Reasons for extending science education to the outdoor program are given. Specific suggestions are listed for carrying on the program.

Carlson, R. E. "How Does Your Camp Rate on Conservation?", Camping Magazine, XXXI, (February, 1959), pp. 27-29.
The conservation carried on as part of the camping program was revealed by 512 questionnaires. Results listed activities concerned with tree planting and forest improvement, erosion prevention, and wildlife conservation.

Committee on Camping in Education for American Association for Health, Physical Education, and Recreation. "The Place of Camping in Education", Journal of the American Association for Health, Physical Education, and Recreation, XXI, (January, 1950), pp. 5-6.
The AAHPER report of the convention which met in Boston in 1949 is given. It dealt with program planning for school camping.

Donaldson, George W. "A Camp Director Looks at His Program", Journal of Educational Sociology, XXXIII, (May, 1950), pp. 529-532.
Eleven characteristics of a good camp are listed and developed.

Ellison, J. "Sixth Grade Takes to the Woods", Saturday Evening Post, CCXXX, (April 19, 1958), pp. 38-39.
The reporter visited sixth grade classes from Indianapolis at their outdoor education center. The reporter followed the planned program and interpreted each activity.

Enkoff, R. L. "Planning and Providing Outdoor Experiences in a Winter Camp", Teachers College Journal, XXXII, (March, 1961), pp. 131-132.
Experiences in conservation, physical sciences, arithmetic, and health are described in the program.

Ferguson, Grant H. "Nature Study in Our School Yard", California Teachers Association Journal, LVII, (November, 1961), pp. 18-19.
A nature trail was built in a school area adjoining the school yard. The children learned science by direct observation.

Fox, Denver C. "The Outdoor Education Curriculum at the Elementary School Level", The Journal of Educational Sociology, XXIII, (May, 1950), pp. 533-540.
The director reviewed his outdoor education program at Camp Cuyamaca in San Diego County.

Hammerman, Donald R. "Research Implications for Outdoor Education", Journal of Health, Physical Education, and Recreation, XXXV, (March, 1964), pp. 89-90.
Investigations are needed in the areas of curriculum, learning child development, behavior, instruction, and teacher education.

Hazzard, Lowell B. "Spiritual Values in Camping", Camping Magazine, XXIV, (June, 1952), pp. 10-11.
Many examples are given of specific ways in which camps can contribute to spiritual values.

Hollenbeck, Irene. "Outdoor Education in Oregon", Science Education, XXXXVII, (March, 1963), pp. 113-122.
A summary is given of a pilot outdoor education laboratory school program at Southern Oregon College in Ashland.

Johnston, Verna. Natural Areas for Schools. Sacramento, California, Conservation Educational Section, State Department of Natural Resources, n.d.

Kilpatrick, William H. "The Role of Camping in Education", Education Digest, VII, (March, 1942), pp. 46-48.
The role of outdoor education does help with social adjustment in both personal and group situations.

Nash, Jay B. "Why a School Camping Program?", The Journal of Educational Sociology, LXXIII, (September, 1952), pp. 500-507.
The values of outdoor education are given, and the benefits which children receive are discussed. One of the greatest values is a sense of belonging.

Pike, Kenneth. "Natural Science Experiences Significant to Elementary School Programs of Outdoor Education", Science Education, (March, 1962), pp. 141-145.

This is an abstract of a dissertation on the science learnings in outdoor education that are significant to a class of elementary school children.

Rooseninek, E. P. "Arithmetic in the School Camp", Arithmetic Teacher, VII, (January, 1960), pp. 22-25.
Detailed suggestions are given for the use of arithmetic in outdoor education.

Sharp, L. B. "Camping and Outdoor Education", The Journal of the National Education Association, XXVI, (May, 1947), pp. 366-367.
The emphasis is placed upon ways in which outdoor education contributes to direct learning experiences for children.

Smith, J. W. "The Michigan Story of Camping and Outdoor Education", Journal of Educational Sociology, XXXIII, (May, 1950), pp. 508-515.
A brief history of the camp at Clear Lake is given.

Staley, Edwin J. "Critical Issues in Recreation and Outdoor Education", Journal of Health, Physical Education, and Recreation, XXXV, (June, 1964), p. 17.
The author shows that research needs to be done in the two areas of recreation and outdoor education. He suggests that more evaluations of programs are needed.

The Presidents Council on Recreation and Natural Beauty. From Sea to Shining Sea. Washington, D. C., U. S. Government Printing Office, 1968.

Vinal, W. G. "Bill of Rights for Outdoor Education", Science Education, XLII, (April, 1958), pp. 187-204.
The teaching of biology in the out-of-doors is discussed with a special section on how outdoor education can be conducted in this area.

Willard, Lotene. "Year-Round Public School Camping", The Journal of the National Education Association, LXIV, (May, 1947), pp. 576-577.
The story of Camp Hi Hill of Long Beach is told.

Wylie, James A. "Camping and the Educational Needs of Children", Education, LXXIII, (September, 1952), pp. 6-10.
The educational needs of children, as developed by Vera Thurston in an unpublished Master's thesis, are identified. Activities in camp designed to meet these needs are described.

__________. "Elementary School Camping at St. Mary's", The Journal of the National Education Association, LXIV, (May, 1947), pp. 368-369.
The emphasis is placed upon values gained by two weeks of outdoor education.

__________. "Outdoor Education Contributes to Science and Conservation Education", California Journal of Elementary Education, XLVI, (November, 1957), pp. 79-86.
The author listed concepts in two categories, those needed for understanding the physical world and those related to living forms. He then listed field experiences which contributed to the concepts.

__________. "Outdoor Education, a National Venture", Recreation, LIV, (October, 1961), pp. 404-405.
Outdoor education should enhance learning and provide opportunities for wholesome outdoor pursuits.

__________. "Outdoor Education - Fad or Fundamental?", Camping Magazine, XXV, (December, 1953), pp. 10-12.
The meaning, setting, leadership, and future of outdoor education are discussed in the article.

__________. "Three Years of Progress", American Association of Health and Physical Education, XXX, (January, 1959), pp. 17-18.
As the project on outdoor education moves forward, it is in a position to capitalize on the gains made in the past, and can make major contributions to the educational systems of the nation.

Directories

Conservation Directory, 1967. Washington, D. C., National Wildlife Federation, 1966.
Comprehensive listing of organizations and agencies concerned with natural resource use and management contains addresses and telephones, titles and names of key personnel; concise explanation of purpose and activities appears for some.

A Directory of Information Resources in the United States: Physical Sciences, Biological Sciences, Engineering. Washington, D. C., National Referral Center for Science and Technology, 1965.
Contains descriptions of over 1,100 resources, such as information centers, libraries, universities, industrial firms, professional societies, government agencies.

A Directory of Information Resources in the United States: Social Sciences. Washington, D. C., National Referral Center for Science and Technology, 1965.
Contains descriptions of over 600 resources, such as information centers, libraries, universities, industrial firms, professional societies, government agencies.

Ulrich's International Periodicals Directory: A Classified Guide to a Selected List of Current Periodicals, Foreign and Domestic. Volume 1: Scientific, Technical and Medical. 12th ed. New York, Bowker, 1967.
Comprehensive list contains titles for young people, the adult layman and for technical or scholarly use. Entries have initial year of publication, frequency, subscription rate, indices which include articles of the specific periodical.

Dictionaries and Encyclopedias

The Audubon Nature Encyclopedia. New York, Curtiss, 1965. 12 v.

Compton's Dictionary of the Natural Sciences. Chicago, Compton, 1966. 2 v.

The Golden Book Encyclopedia of Natural Sciences. New York, Golden Press, 1962. 16 v.

Hanson, Herbert C. Dictionary of Ecology. New York, Philosophical Library, 1962. 382 p.

Jackson, Nora, and Philip Penn. Dictionary of Natural Resources and Their Principal Uses. New York, Pergamon Press, 1966. 128 p.

Bibliographies

Bates, Marston. The Forest and the Sea; A Look at the Economy of Nature and the Ecology of Man. New York, Random House, 1960. 277 p.
Notes and sources at end of text offer credit for ideas developed in book and comments on other books.

Benton, Allen H., and William E. Werner, Jr. Field Biology and Ecology. 2nd ed. New York, McGraw-Hill, 1966. 499 p.
Bibliographic references and reading lists are at ends of chapters. Suggestions for use appear in chapter, "The Use of Biological Literature". Appendix includes classified list of books with degree of difficulty indicated, sources of literature (other than publishing houses), journals, bibliographies.

Day, Lincoln H., and Alice Taylor Day. Too Many Americans. Boston, Houghton Mifflin, 1964. 298 p.
Bibliographic notes appear at end of text by chapters. "Selected Bibliography and Suggested Readings" cites, compares, evaluates studies in several areas of population; some are general introductions, relation of population to economic change and development, resources and consumption.

Smith, Guy-Harold, ed. Conservation of Natural Resources. 3rd ed. New York, Wiley, 1965. 533 p.
Bibliographic footnotes appear throughout text, and references are at ends of chapters. "General Works on Conservation" are listed at end of text.

Conservation Library Center. Basic Books on Conservation. Denver, 1965. 5 p. limited distribution.
Brief report contains responses of leaders in the field concerning books which "they considered of first rank importance in a conservation library". Original request for ten books was made in 1962 and repeated in 1965; over 100 titles were named each time. Report lists the sixteen most mentioned books in 1962 and the eighteen most often listed ones in 1965 (published since 1962). Comments are made on some not listed which are considered of special significance.

Johnson, Carl S., David L. Erickson and Charles A. Dambach. Project Conservation-Materials Conservation. Columbus, Ohio State University, 1966. 20 p. limited distribution.
Report of a survey of "free and inexpensive conservation-education materials prepared for or sent to schools" contains analyses of

nearly 8,000 pieces received. Purpose is to make such materials more effective for conservation education by studying amounts issued, subjects covered, readability levels, quality of contents, distribution practices, production costs. Project has been sponsored by the Cooperative Research Program of the U. S. Office of Education and the University.

Planned Parenthood-World Population. Paperbacks on Population, Family Planning, Related Subjects. New York, 1967. 7 p. limited distribution.

Brief list, prepared by the PPWP library with one-sentence notes, represents an example of the growing recognition and increasing availability of inexpensive books in one subject category. Contains titles suitable "for the professional, the high school and college students and the general reader".

Richard, Marie S. "Bibliography on Air and Water Pollution". Special Libraries, v. 57, No. 6, July-August 1966, p. 385-390.

Articles often contain suggestions for those beginning a collection in one subject category. A librarian's contribution to a professional journal contains a brief report of a local meeting on air pollution and water resources; the needs of a manufacturer (for whom the author works) for library services in these fields are explained. References are cited in four sections: sources of information, books and reports, serial publications, articles.

U. S. Department of the Interior. A List of Publications on Conservation ... and Related Department of the Interior Subjects. Washington, D. C., U. S. Government Printing Office, 1967. 2 p. limited distribution.

Although this leaflet is more accurately a price list, it covers several specific natural resources, includes brief descriptive notes and contains many inexpensive publications as well as books.

U. S. Public Health Service. Division of Air Pollution. Air Pollution Publications: A Selected Bibliography, 1963-1966. Washington, D. C., U. S. Government Printing Office, 1966. 144 p.

Example of a bibliography compiled and issued under government auspices contains examples of technical entries in one subject category; low cost and inclusion of very recent publications contribute to its usefulness on a selective basis. Entries are classified by eleven major subject headings and include monographs, journal articles, conference or report papers.

Wisconsin. State Department of Public Instruction. Conservation Bibliography. Madison, 1966. 40 p. limited distribution.

Classified bibliography represents a cooperative effort between two state departments (public instruction and conservation) and the citation of several titles pertaining to the state. Entries cover conservation of general and specific natural resources, ecology, appreciation of our natural heritage, our crowded cities, careers, resources and guides for teachers; selected lists of periodicals and of information sources are also given. Special attention is focused on "Conservation in Wisconsin". Entries include concise annotations, prices and keys to reading levels.

Cragg, Nadine. "An Evaluation of the Year-Around School Camp of Long Beach, California". Unpublished Doctoral dissertation, University of Michigan, 1952.

This study in evaluation is based on the results of changes in children who participate in the program.

Cyphers, Vincent. "Significant Outdoor Experiences". Unpublished Doctoral dissertation, Colorado State College, 1961.

A number of teachers selected outdoor experiences which they thought were important.

Johnson, Tessa Mae. "An Evaluation of a Semi-objective Method of Appraising Selected Educational Outcomes of School Camping". Unpublished Doctoral dissertation, University of Southern California, 1951.

An evaluation was made of the results of changes in children after a week in an outdoor education program.

Kranzer, Herman. "A Study of Clear Lake Camp's Contribution to the Elementary Curriculum". Unpublished Doctoral dissertation, University of Michigan, 1952.

The study determined the extent of the outcomes of desirable learnings which were attained at Clear Lake.

Moore, Harriet Brown. "A Plan for the Organization of Camps as an Integral Part of the Public School System of the City of New York". Unpublished Doctoral dissertation, Teachers College, Department of Education, Columbia University, 1943.

The study ascertained the desired outcomes of outdoor education.

Pike, Kenneth. "Natural Science Experiences Significant to Elementary School Programs of Outdoor Education". Unpublished Doctoral dissertation, University of California, Los Angeles, 1959.

Science experiences which fulfill the objectives of the elementary science curriculum and are suitable for outdoor education were selected.